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THE OOLOGIST,

FOR THE

STUDENT OF BIRDS,

THEIR NESTS AND EGGS.

VOLUME XI.

ALBION, N. Y.

FRANK H. LATTIN, PUBLISHER,

1894.

14022

A. M. EDDY,
PRINTER AND BINDER,
ALBION, N. Y.
1894.

INDEX TO VOL. XI.

Accident, A Curious.....	266	Calanders.....	56
Accidental Death of Birds	95, 152	Canary, A Prolific.....	368
Advice, A Little.....	216	Canary, Wild.....	240, 305
Albinistic Eggs.....	98	Canvas-back.....	95, 158
Albino eggs of the Grasshopper Sparrow.....	313	Cardinal.....	53, 234, 327, 334
Alewife.....	173	Catbird.....	53, 144, 233, 255, 301, 327, 334
American Ornithologist's Union.....	370	Chat, Yellow-breasted.....	326, 327
Anhinga.....	14	Chautauqua.....	267
Aquarium, Collecting for an.....	244	Chewink.....	325
Arizona, Dove Life in	229, 243	Chickadee.....	53
Audubon's Biography, Notes From.....	201, 231, 261, 281, 308, 335, 362	Chickadee, Black-capped.....	51, 207, 327, 334
Bagg, Egbert.....	243	Chickens, Cary.....	329
Baldhate.....	94	Chickens, Prairie.....	142, 208
Barbarism of Fashion, The.....	367	Chip Bird, Winter.....	208
Baylis, A. W.....	267	Chippy.....	303
Bird, Bridge.....	285	Coale, Henry K.....	217
" Cherry.....	305	Cock, Chapparral....	265
" Ground.....	305	Collecting Live Birds.....	93
" Lazy.....	305	Collecting, viz:— Oological.....	327, 337
Bird Life, The Study of.....	325	Collections, Washington School.....	370
" Moss.....	285	Conglomeration.....	287
" Potato.....	305	Coot.....	95
" Skins, Values of.....	217, 219	Coot, American.....	96, 142, 182
Bird Slaughter, Protest Against.....	361	Coots, Sea.....	95
Bird, Yellow.....	305	Cormorant, Baird's.....	253
Birds From Six Eggs, Seven.....	368	Cormorant, Double-crested.....	282
Birds, Observations on.....	312	Cowbird.....	52, 53, 215, 226, 255, 278
Birds of North America, A List of.....	219	Crane, Great White.....	263
Bishop, Dr. L. B.....	98	Crane, Island.....	282
Bittern, American.....	142, 181, 359	Crane, Nesting of the Whooping.....	263
Bittern, Least.....	182	Crane, Sandhill.....	263, 357
Blackbird, Crow.....	305	Cranes.....	142
Blackbird, Red-winged.....	11, 52, 53, 142, 181, 234, 288, 301, 334	Crank, A.....	212
Blackbird, Yellow-headed.....	142, 181, 182	Creeper, Brown.....	53
Black-breast.....	96	Crow, American.....	51, 93, 141, 142, 147, 207, 232, 233, 256, 304, 310
Blackhead, Bay.....	95	Crow, Nidification of The Fish.....	310
Blackhead, Creek.....	95	Crow, Rain.....	26
Blackhead Little.....	95	Crows, The Language of, and Other Notes.....	241
Bluebird.....	53, 234, 288, 334	Cuckoo, Black-billed.....	53, 301
Boat, An Inexpensive.....	177	Cuckoo, Yellow-billed.....	53, 233, 301, 33
Bobolink.....	139, 142	Cudlup, Howard.....	149
Bob-white.....	93, 137	Curlew, Eskimo.....	137
Bob-white, Florida.....	11	Curlew, Long-billed.....	137
Bob-white, Some Experience with the		Curlew, Sickle-billed.....	137
Young of the Ruffed Grouse and.....	359	Data and Field Books, Hints About.....	13
Brant.....	96	Davie's "Methods in The Art of Taxider-	
Brill, Wm. B.....	243	my".....	366
Broadwings of '92 and '93, My.....	169	Delany, James.....	267
Bubos at Home, A Pair of.....	179	Dipper.....	95
Buffhead.....	95	Dissolution of F. H. Lattin & Co.....	237
Bunting, Black-throated.....	142, 288	Dodge, Harold H.....	243
Bunting, Snow.....	51	Domestication of the Ruffed Grouse and	
Butterball.....	95	Bob-white.....	359
		Dove, Inca.....	229

THE OÖLOGIST.

Dove Life in Arizona.....	229, 243
Dove, Mourning.....	50, 139, 142, 229, 234, 288, 334
Dove, White-winged.....	230
Dowitcher.....	97
Duck, Acorn.....	95
Duck, American Scaup.....	95
Duck, Black.....	52, 94
Duck, Crow-billed.....	96
Duck, Dusky.....	94
Duck, Gray.....	94
Duck, Lesser Scaup.....	95
Duck, Long tailed.....	95
Duck, Raft.....	95
Duck, Ruddy.....	95, 182
Duck, Summer.....	95
Duck, Tree.....	95
Duck, Wood.....	95
Eagle, Golden.....	243
Eagle in Indiana, The Golden.....	184
Eagles in Missouri, Bald.....	55
Eagles in Southeast Michigan, Reappear- ance of Bald.....	214
Early Find, An.....	184
Eggs, Shapes of.....	280
Exposition, Sportsmen's.....	370
Field Books, Hints About Data and.....	139
Field Notes, A Few.....	233
Finch, Grass.....	337
Fire-Bird.....	355
Fire Hang.....	305
Fish, A New Species of.....	56
Flicker.....	53, 94, 146, 240, 334
Flicker, Another Prolific.....	55
Flicker, Red-shafted.....	49, 288
Flickers, Watching.....	47
Florida, A Collecting Trip in.....	11
Flycatcher, Crested.....	288, 334
Flycatcher, Least.....	301
Flycatcher, Pewee.....	285, 306
Flycatcher, Pewit.....	285
Flycatcher, Traill's.....	306
Ford, Walter J.....	268
Fox vs. Crows.....	232, 256
Frauds Again.....	49
Gadwall.....	94, 182, 358
Godwit, Marbled.....	97, 359
Golden-eye, American.....	95, 359
Goldfinch, American.....	53, 244, 327, 334
Goldfinch, Arizona.....	183
Goldfinch, European.....	53
Goldfinch, Some Notes on the Habits of the Arkansas.....	240
Goose, American White-fronted.....	96, 358
Goose, Canada.....	96, 142, 243, 358
Goose, Lesser Snow.....	95, 358
Grackle, A White.....	48
Grackle, Bronzed.....	142, 234
Grackle, Purple.....	52, 53, 302, 334
Gray-back.....	97
Grosbeak, Evening.....	84
Grosbeak, Rose-breasted.....	255, 326, 327, 357
Grouse and Bob-white, Some Experience with the Young of the Ruffed.....	359

Grouse, Columbian Sharp-tailed.....	182
Grouse, Pinnated.....	138
Grouse, Ruffed.....	137, 138, 208
Gnelt, George F.....	267
Guillemot, Black.....	331
Gull, American Herring.....	53
Gull, Franklin's.....	182, 357
Gull, Nesting of the Western.....	253
Gull, Ring-billed.....	141, 142, 182, 183, 358
Gull, Slough.....	141
Gull, Western Herring.....	253
Hawk, Black.....	93
Hawk, Broad-winged.....	52, 169
Hawk, Cooper's.....	52, 169
Hawk, Hen.....	305
Hawk, Marsh.....	50, 142
Hawk, Red-shouldered.....	52, 53
Hawk, Red-tailed.....	10, 51, 182, 206, 233
Hawk, Rough-legged.....	237
Hawk, Sparrow.....	334
Hawk, Swainson's.....	182
Hawks, A day with the Cooper's.....	304
Hell Divers.....	95
Herbarium and Plant Record.....	218
Heron, Black-crowned Night.....	11, 53, 183
Heron, Great Blue.....	52, 282
Heron, Green.....	11, 52, 53, 233
Heron Lake, Water Birds of.....	357
Heron, Little Blue.....	11
Hummingbird, Anna's.....	184
Hummingbird, Ruby-throated.....	53
Hummingbird's Nest, A Beautiful.....	280
Indiana, The Golden Eagle in.....	184
Iowa, A Collecting Trip in Northern.....	141
Iowa, Vireonidæ in.....	214
Jay, Blue.....	51, 53, 141, 142, 203, 208, 234, 327, 334
Jingler.....	95
Junco, Slate-colored.....	50, 333, 334
June '94, The First Day of.....	254
Killdeer.....	138, 334
Killdeer, Nesting Habits of the.....	257
Killdeer's Nest, An Elevated.....	186
Kingbird.....	53, 142, 234, 304, 327, 334
Kingfisher, Belted.....	53, 303, 327
Kinglet, Ruby-crowned.....	53
Kite, White-tailed.....	243
Knot.....	96
Lark, Meadow.....	142
Lark Prairie Horned.....	50
Lattin & Co., Dissolution of F. H.....	267
Lawrence, George Newbold.....	43
Lawrence, George Newbold (half tone).....	42
Letter From John B. Hindtime.....	45
Loon.....	359, 364
Loon, Black.....	283
Longspur, Chestnut-collared.....	182
Mallard.....	94, 142, 182, 207, 233, 358
Mallard, Marsh.....	94
Marsh-hen, Freshwater.....	96
Marsh-hen, Saltwater.....	96
Martin, Bee.....	234
Martin Purple.....	98, 142, 183
Mathes, Kirk B.....	267, 370

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CONTENTS.

The following table of contents enumerates some of the principal articles in each issue. The "short articles" mentioned are one column or less in length and are all of great value to the student. Not mentioned in the list of contents, each issue contains one or two pages of "items" or "brief notes," one column to four pages of exchange notices, and from three to eight pages of advertisements, besides a "query column" which occurs in many, although not all, issues.

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VOLUME I. Nos. 1, 2, 3, 4, 5, and 12 each contain 16 pages. Nos. 6, 7, 8, 9, and 10 each contain 20 pages. No. 11 contains 36 pages.

No. 1.—Instructions for Collecting Birds' Eggs, (3 pages); Coues' Key; Twenty-four short articles. May, '84.

No. 2.—Instructions for Collecting Birds' Eggs, concluded, (2 pages); Painted Buntings; Cala. Mottled Owl; List of Birds Found at Montreal; 24 short articles. June, '84.

No. 3.—Maine Items; Yellow-headed Blackbird; Orchard Oriole; The Slip System; Wilson's Thrush; Hand-book of Agassiz Association; 23 short articles. July, '84.

No. 4.—Screech Owl; Importance of Identification; A La. Heronry; Cardinal Crossbeak; Eagle's Nest; How to Make and Use Bird Lime; 14 short articles. Aug., '84.

No. 5.—Bird-nesting—To Collect Scientifically, (3 pages); Cala. Birds; From Wyoming; 25 short articles. Sept., '84.

No. 6.—Bobolink, (2½ pages); Sea Birds of Maine; Eggling in Cala. Swamp; Old "Put" and the Bird's Nest; List of Wisconsin Birds; 12 short articles. Oct., '84.

No. 7.—Bronzed Grackle; Singular Duel; Fish Hawk; Spurred Towhee and Least Tit; Old "Put" and the Bird's Nest; Bird Island; 14 short articles. Nov., '84.

No. 8.—The Alligator; Collecting in Marshes; Woodcock; "Our Birds in Their Haunts"; Iowa Notes; Redstart; Summer Redbird; 18 short articles. Dec., '84.

No. 9.—Baltimore Oriole; Texas Jottings; Sapsuckers; Barn Owl; American Ornithologists' Union, (3 pages); How to Handle a Gun; Black-capped Titmouse; Egg of the Moa. Jan.

No. 10.—Winter Wren; Cala. Duck Hunting; Screech Owl; *Davie's* Egg Check List; Peacock with Queer Tastes; White-bellied Nuthatch; Blue Jays; Spotted Robin Eggs; 8 short articles. Feb., '85.

No. 11.—Bank Swallow; English Sparrows; Study of Birds; Gt. Horned Owl; Yellow-billed Cuckoo; Gambel's Quail; Conn. Notes; Intelligence of the Oriole; Yellow-breast Chat; Maryland Yellow-throat; White-rumped Shrike; List of Pacific Coast Birds; Knights of Audubon; Sample Data Blanks, (4 pages); 32 short articles. March, '85.

No. 12.—*Completes Vol. I.* Title pages for binding, with complete and exhaustive index, (8 pages.) April, '85.

VOLUME II. consists of but two numbers. Each contains 32 pages.

No. 13.—Bartram's Gardens; South Carolina Observations, (6 pages); Scientific Names; Gt. Horned Owl; Bank Swallows; Knights of Audubon; Hummingbird; R. I. Notes; Texas Jottings; 30 short articles. May, '85.

No. 14.—American Crossbill; Audubon's Birds of America; Illinois Notes; Destruction of Birds; Cuckoos; Cala. notes; Wrens on the Warpath; Golden-winged Warbler; Fox Sparrow; Our Winter Birds; Snipe Creek; Red-head; Wisconsin Jottings; Burrowing Owl, etc.; A Florida Trip; Horned Lark; Queer Homes and Nesting sites; Brave Bird; Ferruginous Rough Leg; Sparrows; Pigmy Nuthatch; 26 short articles. June, '85.

THE OOLOGIST.

Volumes III. and IV. are Bi-Monthly. The remaining volumes are Monthly.

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No. 15.—Full page Frontispiece.—*American Water Ouzels and Nest*; Chester Island and the Marsh Wrens; Birds of Cortland Co., N. Y., (4½ pages); A Cheap Cabinet; Summer Birds about Washington, D. C.; Davie's Nests and Eggs of N. A. Birds; Water Blowpipe; 5 Short Articles. Jan. & Feb., '86.

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- Minnesota Notes: Yates County (N. Y.) Notes; 8 short articles. Sept. to Nov., '88.
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- No. 22.—Notes from Spoon River Region, Illinois; Peculiarities of the Ruby-throated Hummingbird; Purple Gallinule; How to Collect; Bird Surgery; Rufous-vented and Bendire's Thrashers and Canon Towhee; Nesting Items; Notes from College Hill, Ohio; Nesting of our Swallows; Notes from Sullivan Co., N. Y.; Blue-Gray Gnatcatcher; Notes from Connecticut; Fidelity of the Song Sparrow; 13 short articles. March to May, '87.
- Nos. 23-24. Combined number.—Tour in the Woods at Fort Washington, Pa.; National Museum (Department of Birds, Nest and Eggs); Beaver County, Pa. Notes; Black-capped Chickadee; Hawking; Agassiz Association and its Work; Crow Roosts of New Jersey; Swainson's, Warbler; Destroy the Cowbird; Traill's and Acadian Flycatchers; 7 short articles. June to Sept., '87.
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- No. 28.—Title pages for binding, with complete and exhaustive Index of Volume IV; Egg of *Apornis Maximus*, the Colossal Bird of Madagascar (6½ pages); Fish Crow. Feb., '88.
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- Nos. 36-37. Combined number.—American Osprey; A Day with the Gulls; Florida Notes; A Plea for the English Sparrow; Useful Contrivances; Game Laws; Notes from Lake County, Ohio; South Carolina Notes; A Pleasant Excursion; Sparrows and Cat; Hermit Thrush; Western House Wren; A Few Words to Observers; Flying Squirrels Occupying Birds' Nests; 15 short articles. Oct., Nov.
- No. 38.—Ostrich Farming; An Afternoon's Collecting Trip; California Notes; Notes from S. Lawrence Co., N. Y.; Bird-Arrivals in N. E. Indiana; Bank Swallow: Faunal Changes, —DeKalb Co., Indiana; Audubon Monument; 10 short articles. Dec., '88.
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- No. 42.—Raptors of Michigan (3 pages); Nesting of the Tufted Tit; Peculiarities in Sets and Eggs of a Few of our Commoner Birds; Difference between White-rumped and Loggerhead Shrikes; Birds of Grafton Co., N. H.; Sample Pages of Davie's New Check-List; 6 short articles. April, '89.
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- No. 47.—"Old Abe" Jr.; A Day's Collecting Trip; Bell's Vireo; Black Tern; Yellow-rumped Warbler; An Automatic Blower; Flight of Ducks; White-eyed or Florida Towhee; Pygmy Owl; Cooper's Hawk; 10 short articles. Sept., '89.
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hatch; Prairie Horned Lark; Collecting Experience; Snowy Owl; Nest of the Texan Bobwhite; Unusual Nesting of the Downy Woodpecker; Evening Grosbeak; Blue-Gray Gnatcatcher and Tufted Tit; 6 short articles. Feb.

No. 53.—Summer Residents of Buena Vista County, Iowa; In the Woods of Florida; Birds of Mackinac Island, Mich.; Among the Gulls on Isle Royale; Sandhill Crane; Evening Grosbeak; Rubr-crowned Kinglet; Cactus Wren; Screech Owl in Captivity; Taking Birds' Nests; 11 short articles. March, '90.

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No. 56.—Nesting habits of the American Oystercatcher; Prairie Horned Lark; Saw-Whet or Acadian Owl; Pine Warbler; Bluebird; Albinos; Pileated Woodpecker in Mahoning County, Ohio; Belligerent Neighbors; Recording the number of Birds Observed; Book Review; Prospectus of the Worcester Natural History Camp (4½ pages); 12 short articles. Je.

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No. 61.—The Ruby-throated Hummingbird (Fairies in a Fairyland) (3½ pages); Notes from Travis Co., Texas; A Week to Mt. Hamilton; Great Horned Owl; Strange Co-habitation; Brewer's Blackbird; Nesting of *Contopus borealis* in Maine; A Letter from Oliver Davie Relating to his New Work on Taxidermy; Notes on *Ardea herodias*; The Prothonotary Warbler; Nesting of the Virginia Rail; The Yellow Rail in Mich.; An Outline of the More Valuable Articles Appearing in the YOUNG OÖLOGIST (3 pages); 7 short articles. Nov., '90.

No. 62.—The Rusty Blackbird; Notes from Ohio; Evening Grosbeak in New Hampshire; The Cala. Partridge or Valley Quail; Nothing at All—a Poem; Case for Instruments; Notes from Island Lake, Florida; 3 short articles. Dec., '90.

VOLUME VIII. No. 63 contains 24 pages. No. 64, 32 pages. No. 66-67, 36 pages including cover. The balance, 20 pages, including covers No. 74 also contains an additional 4 page inset.

No. 63.—A Day Among the Fish Hawks; The Marsh Wrens of Hudson Co., N. J.; Now,—The Time to Wage War on the English Sparrow; Nesting of the Downy Woodpecker in Kalamazoo Co., Mich.; American Sparrow Hawk; Anna's Hummingbird; Was it a Cowbird's nest; Florida Red-shouldered Hawk; On Owl's Tenacity to Life; Western Horned Owl; Albino Eggs; An Afternoon with the Birds; A "Good Enough" Way to Blow Egg; Meeting of the A. O. U.; Expert Taxidermy; 5 short articles. Jan. '91.

No. 64.—Flycatcher Notes; Collecting in the Marsh; House Finch; The Barred Owl; Yellow-breasted Chat; Anna's Hummingbird; Birds North of Their Usual Range; Egg Collecting—The Two Classes; A Perfect Collectino; Texas Notes; Nesting of *Spinus pinus* in the Northwest. Title pages for binding with complete and exhaustive index for Vol. vii. 4 short articles. Feb. '91.

No. 65.—A New Year's Soliloquy; Water Ouzel; An Ornithological Paradise; "The English Sparrow Must Go!"; Fond Mothers; Passenger Pigeon; The Oölogist; Caracara or Mexican Eagle; The Cooper's Hawk; Some Early Birds of Llan Co., Oregon; Broad-winged Hawk; The Extinction of Our Birds. Mar. '91

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VOLUME XI.

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Maryland Birds That Interest the Sports-	Owl, Hoot.....	8
man.....	Owl, Mottled.....	7
Meadowlark.....	Owl, Screech.....	7, 93, 208, 334
Merganser, American.....	Owl, Snowy.....	8, 209
Merganser, Finding A Nest of The Hooded.....	Ox-eye.....	137
Merlin, Nesting Habits of Richardson's.....	Paisano.....	265
"Methods in the Art of Taxidermy".....	Parrot, Sea.....	353
Michigan, Raptors of.....	Partridge.....	137, 208, 360
Midwinter Fair, Notes From the.....	Partridge, California.....	253
Minnesota Swamp, Collecting in A.....	Peabody, Rev. P. B.....	243
Minnesota, The Woodpeckers of.....	Pelican, Brown.....	55, 148
Minnesota, Water Birds of Heron Lake,.....	Pelican in Florida, Nesting Habits of the	
Mockingbird.....	Brown.....	81
Mud-hen.....	Pelican in Illinois, American White.....	55
My Friend Hairy.....	Pelican Island, A Disasterous Season on.....	148
Natural History, Royal.....	Pelican Island Indian River, Florida.	
Necrology.....	(Half-tone of Nest Eggs and Birds).....	80
Nest, A Remarkable. (Half-tone).....	Pennsylvania, Summer Birds of Greene	
Nesting, Late.....	Co.....	14
Nests, A Study of.....	Pet, My Loquacious.....	203
Nests, Construction of.....	Petrel, Leach's.....	329
Nests, Position of.....	Pewee, House.....	285
Nests, Some Twice Occupied.....	Pewee, Wood.....	325, 327
New York, Birds of Western.....	Pewit.....	285
New York, Grasshopper Sparrow in On-	Phainopepla.....	259
tario Co.....	Phalarope, Wilson's.....	141, 142, 263
New York, Naturalist's Association West-	Pheasant.....	138
ern.....	Philately, Oology vs.....	279
New York, The Spring and Summer Birds	Phoebe.....	53, 211, 302, 327, 334
of Central Park.....	Phoebe, Barn.....	305
Nighthawk.....	Phoebe, Bridge.....	305
Nighthawk, An Albino.....	Phoebe, Notes on The.....	285
Nighthawk, Western.....	Phoebe, Tree.....	305
Nightmare, An Editorial. Illustrated.....	Pigeon, Nesting Habits of the Passenger.....	371
Norris, J. Parker, Oological Collection of.....	Pigeon, Passenger.....	92, 138
North Dakota, A Collecting Trip in.....	Pigeon, Wild.....	138
Nuthatch, White-breasted.....	Pintail.....	95, 142, 182, 263, 359
<i>Nyctequns</i> . Illustrated.....	Pintail, Chicken.....	182
Observation on Birds.....	Plover, American Golden.....	138
Ohio, Habits of the American Woodcock	Plover, Black-bellied.....	137
in Ashtabula Co.....	Plover, Black-breast.....	137
Oldfield, W. A.....	Plover, Beetle-head.....	137
Old-squaw.....	Plover, Bull-head.....	137
Oological, Collecting viz:—.....	Plover, Field.....	137
Oological Collection of J. Parker Norris	Plover, Grass.....	137
and Son.....	Plover, Killdeer.....	257
Oological Collections.....	Plover, Little Yellow-leg.....	97
Oologist, Contents of 99 Back No's.....	Plover, Upland.....	137
Oologist of Early Day, An.....	Plover, Yellow-leg.....	97
Oology vs. Philately.....	Poachard.....	95
Oriole, Baltimore.....	Posson, Neil F.....	267
Oriole Baltimore, A Remarkable Nest of	Prairie Hen.....	93, 138
(Half-tone).....	Prize Contest.....	14
Oriole, Orchard.....	PRIZE CONTESTS, December ('93).....	56
Ornithological Work.....	January.....	98
Ornithologist's Union, American.....	February.....	154
Ornithology of a Church Yard, The.....	March.....	154
Ortolan.....	April.....	186
Outlet Creek, Along the.....	May.....	244
Oven Bird.....	June.....	268
Owl, Barred.....	July.....	289
Owl, Cat.....	August.....	314
Owl, Great Horned.....	September.....	314
	October.....	338
	November.....	371

Protect Our Birds.....	214, 288
Protest Against Bird Slaughter	361
Puffin, A Few Notes on the Tufted.....	353
Puffin, (Half-tone of Egg, Nest, and Nest- ing Site).....	353
Quail	137, 361
Quail, Messina.....	139
Quincy, Edward.....	243
Rail, Carolina.....	96
Rail, Clapper.....	96
Rail, King.....	96
Rail, Sora.....	141, 142, 181
Rail, Virginia.....	96, 142, 181
Rain-crow.....	326
Raptors of Michigan.....	7
Red-bird.....	355
Redhead.....	95, 359
Redpoll.....	53
Redstart, American.....	53, 256
Reed, Charles K.....	256, 329, 369
Remarkable Tenacity of Life.....	150
Road-runner, The.....	265
Robin, American.....	52, 53, 142, 301, 334
Robin, English.....	305
Sandpiper, Bartramian.....	137, 141, 142
Sandpiper, Least	142
Sandpiper, Pectoral.....	142, 359
Sandpiper, Red-backed.....	97
Sandpiper, Semi-Palmated.....	359
Sandpiper, Spotted.....	53, 331, 334
Sapsucker, Yellow-bellied.....	146
Scoter, American	95
Sedge-hen.....	96
Shad Spirit.....	173
Shags.....	253
Shapes of Eggs.....	280
Shrike, Loggerhead.....	11
Shrike, White-rumped.....	183
Shuffler.....	95
Siskin, My first Set of Pine.....	185
Skylark, English.....	53
Smith, Wm. G.....	49
Snipe, English.....	172
Snipe, Grey-back.....	97
Snipe, Irish.....	173
Snipe, Jack.....	173
Snipe, Robin.....	97
Snipe, Robin-breast.....	97
Snipe, Wilson's.....	96, 172
Snowflake.....	51
Snyder, Fred D.....	267
Sora.....	96
Southerly, South.....	95
Sparrow, Albinos of the Grasshopper.....	313
Sparrow, Baird's.....	182
Sparrow, Chipping	53, 234, 301, 327, 334
Sparrow, English	53, 88, 288
Sparrow, Field.....	53, 233, 327, 331, 334
Sparrow, Harris'.....	326
Sparrow in Michigan, Henslow's..	217
Sparrow in Ontario Co., New York, Grass- hopper.....	336

Sparrow in St. Lawrence Co., New York, White-throated....	54
Sparrow, Lark.....	326
Sparrow, Nesting of Leconte's.....	88
Sparrow, Savannah.....	331
Sparrow, Song.....	53, 327, 331, 334
Sparrow, Swamp.....	53
Sparrow, Tree.....	50, 208, 334
Sparrow, Vesper	327, 334, 337
Sparrow, White-throated.....	53, 333
Sparrow, Yellow-winged.....	313, 337
Spoonbill.....	142
Sprigtail.....	95
Starling.....	305
Starling, Tree	305
Supper, Third Annual, of the K. K. K. Club.....	49
Swallow, Bank.....	253, 302
Swallow, Barn.....	53, 234, 286, 302, 334
Swallow, Blue-backed.....	304
Swallow, Chimney.....	204, 305
Swallow, Cliff.....	211
Swallow, Eave.....	211, 305
Swallow, Notes on the Barn.....	211
Swallow, Rough-winged.....	53
Swan, Whistling.....	96
Swift, Chimney.....	53, 211, 234, 266, 286, 326, 334
Swift, Migration of the Chimney.....	204
Tanager, Scarlet.....	53, 355
Tanager, The Scarlet	355
Tarpots.....	95
Taylor, H. R.....	243
Taxidermy, Methods in the Art of.....	366
Teal, Blue-winged.....	94, 142, 263, 328
Teal, Green-winged.....	94, 358
Tern, Black.....	141, 142, 181, 182, 263
Tern, Common.....	183, 331
Tern, Foster's.....	358
Thistle-bird, Song of the	244
Thoughts, A Few	87
Thrasher, Brown.....	53, 327, 334
Thrasher, California.....	259
Thrasher's Song, The.....	259
Thrush, Brown.....	142, 233, 305
Thrush, Hermit.....	53, 256
Thrush, Olive-backed.....	53
Thrush, Wilson's.....	53, 233, 255
Thrush, Wood.....	53, 301, 334
Tit, Ground.....	213
Towhee.....	53, 234, 325, 327
Turkey.....	138
Turner, William.....	243
Turnstone.....	138
<i>Urinator imber</i> , Some Queer Habits of.....	364
Vireo, Bell's.....	234
Vireo, Hutton's.....	287
Vireo, Red-eyed.....	53, 214, 234, 256, 302, 325, 334
Vireo, Warbling.....	53, 215, 327, 334
Vireo, Western Warbling.....	13
Vireo, White-eyed.....	53, 235, 334
Vireo, Yellow-throated	53, 215, 302
Vireonide in Iowa.....	214
Vulture, Turkey.....	233

THE OÖLOGIST.

Warbler, Black and White.....	53	Whistler.....	95
Warbler, Blackburnian.....	53	Widgeon.....	94
Warbler, Black-throated Blue.....	53	Widgeon, European.....	94
Warbler, Black-throated Green.....	53, 243	Willet.....	97
Warbler, Black-poll.....	53	Wilson Ornithological Chapter of the Agassiz Asson.....	14
Warbler, Blue-winged.....	53	Wilson, Scenes From the Life of Alexan- der, His Second Southern Tour.....	89, 142
Warbler, Canadian.....	53	His Last Days.....	174
Warbler, Chestnut-sided.....	53, 255, 301	Wilson's Ornithological Club.....	242
Warbler, Golden-winged.....	185	Winter Bird Life, Some.....	207
Warbler, Hooded Flycatching... ..	277	Winter Bird Notes, Some.....	50
Warbler, Magnolia.....	53	Woodcock, American.....	96
Warbler, Mourning.....	333	Woodcock in Ashtabula Co., Ohio, Habits of the American.....	264
Warbler, Myrtle.....	53, 192	Woodpecker, Downy	51, 53, 146, 208, 334
Warbler, Nashville.....	311	Woodpecker, Hairy.....	51, 86, 145, 208
Warbler, Nesting Habits of the Chestnut- sided.....	331	Woodpecker, Pileated.....	146
Warbler, Nesting Habits of the Golden- winged.....	311	Woodpecker, Red-headed.....	146, 234
Warbler, Nesting Habits of the Hooded.....	277	Woodpeckers of Minnesota, The.....	145
Warbler, Parula.....	53	World's Columbian Exposition, The Oolo- gist's Exhibit of Birds Eggs at the.....	14
Warbler, Pine-creeping.....	303	Wren, House.....	53, 98, 334
Warbler, Prairie.....	333	Wren, Marsh.....	142
Warbler, Redpoll.....	142	Wren, Parkman's.....	183
Warbler, Worm-eating.....	53	Wren, Swamp.....	305
Warbler, Yellow Palm.....	53	Wren, Tit or Ground Tit, The.....	213
Wasson, Leon.	369	Yellow-hammer.....	146, 305
Water Birds of Heron Lake.....	357	Yellow-legs.....	97, 142
Waxwing, Bohemian.....	54	Yellow-legs, Greater.....	97, 357
Waxwing, Cedar.....	53, 334	Yellowthroat, Maryland.....	53, 142, 302, 311, 329
Whiffler.....	95		
Whip-poor-will, The.....	209		



OÖLOGIST.

Monthly.

50c. per Year.

VOL. XI.

ADBION, N. Y., JAN., 1894.

NO. 1

Wants, Exchanges, and For Sales.

Brief special announcements. "Wants," "Exchanges" "For Sales," inserted in this department for 50c per 35 words. Notices over 35 words, charged at the rate of one cent per each additional word. No notice inserted for less than 50c. Terms, cash with order.

Strictly First-class specimens will be accepted in payment at one-half list rates.

"DEALERS" can use these columns at *Regular Advertising rates, only*.

Exchange Cards and Coupons (subscription) will be accepted for "Wants" and "Exchanges" *only* and according to conditions stated thereon.

NOW is an opportune time for **YOU** to renew your subscription to the **OÖLOGIST** for 1894, and if in arrears to make an early settlement of the same. Whether this reminder applies to you or not, is it not high time that **YOU** sent us at least one new subscriber

TO EXCHANGE.—Birds skins for same or eggs in sets with data or collecting tube for 12 gauge gun. MRS. H. K. SEDGWICK, Dexter, Mich.

HAVE skins, sets and many articles to exchange for skins and sets. Send list, stating what you want. I may have it. N. HOLLISTER Delavan, Wis.

TO EXCHANGE. \$9 worth of birds eggs in singles for U. S. Postage Stamps. CLARENCE LUTHER, P. O. Box 322, Fayetteville, Ark.

TO EXCHANGE.—Stamps for curios or eggs, 100 stamps for 8c, 1 good stylographic pen sell cheap for cash. All answered. JAMES HOWE SLATER, Webster, Mass.

NOTICE.—Those desiring strictly 1st class fully identified sets or singles from this locality during the coming season would do well to address me for rates. GEO. D. FRENCH, Ivoryton, Conn.

WANTED.—To buy or possibly exchange, 1st class sets of eggs with data. Collectors in other localities kindly write. H. B. HOLLIS, Wellesley Hills, Massachusetts.

FOR EXCHANGE.—Snare drum without heads, Prussian modes nickel plated trimmings with sticks. Cost \$12. To exchange for the best offer of first-class eggs. J. O. JOHNSON, Southington, Conn.

NOTICE.—Will give fine polished Mexican opal (price \$1) for each dozen good flint heads sent me, also highest price paid for Columbian stamps. All letters answered. WILL D. WALTMAN, 330 E. Kiowa St., Colo. Springs, Colo.

FOR SALE.—An 1853 quarter without rays over eagle or arrows side of date. In fair condition somewhat scratched. Will sell or exchange for best offer. LAURENCE APPLETON, Haddonfield, N. J.

TO EXCHANGE.—First-class birds eggs for good books, violin, or musical instruments of any kind. DANA P. GILLET, Barre Center, Orleans Co., N. Y.

TO EXCHANGE.—\$150 worth of stuffed birds and mammals, stamps, eggs and rifle to exchange for a watch, silver cornet and bicycle. FRED S. HAGGART, Chagrin Falls, Ohio.

TO EXCHANGE.—Magic Lantern, ten slides and first-class singles and sets with data, to exchange for climbing irons or first-class sets with data. FRANK H. BOTSFORD, Lyndonville, N. Y.

I HAVE 55 first-class Southern California eggs, 43 varieties, value \$25, to exchange for good copy of Ridgeway's Manual or cash. Make offer and send for lists. I. N. CAMP, De Luz, San Diego Co., California.

MOUNTED BIRDS and Animals at lowest prices. Gray Rabbit, \$1.50; Blue Jay, 75c.; English Sparrow, 40c.; Black-capped Chickadee, 50c.; White-bellied Nuthatch, 60c.; Black Snow Bird, 65c. Skins also mounted at lowest rates. Send stamp for list. Address, D. J. BULLOCK, Marshalltown, Ia.

NEBRASKANS Attention! I desire to procure the address of every one interested in Ornithology and Oology in Nebraska and therefore request all interested to send me their address. ISADOR S. TROSTLER, 4246 Farnam St., Omaha, Neb.

On the wrapper of next months (Feb.) OÖLOGIST you will find some figures following your name. If "98," it will signify that your subscription expired with December, 1893. If "110," that your subscription has been paid through 1894. Other figures will be explained next month.

EXCHANGE.—New Wilson's Ornithology cost \$7.50. eggs, sets, singles, new 38 revolver for strapped climbers, singles, ornithological books. B. H. SWALES, 129 Woodward, Ave., Detroit, Mich.

WANTED.—Latest edition of Cones' Key, 32 or 38 cal. Marlin Repeater, 38 cal. Colt's revolver or any thing I can use. Have to exchange American Bulldog revolvers, 32 and 38 cal., belts, etc., etc. No cards wanted. All letters answered. HORACE H. FELL, 3658 Dearborn St., Chicago, Ill.

EGG COLLECTORS.—Something new for you. The "Eureka" collecting ladder, 30 feet long, rope side, oak rounds, steel grab hook. Can be attached to limb from ground and detached after descent. The best climber extant, strong, light, durable, price \$2.50. WM. WAKE, Naturalist, Knoxville, Tenn.

TO EXCHANGE.—Mounted birds, deer antlers mounted on skull and skins for skins, skins of Scarlet Tanager and Cardinal Grosbeak especially desired. All letters answered. Address, D. J. BULLOCK, Marshalltown, Iowa.

FIRST-CLASS sets and singles to exchange for same A. O. U. No. 488 1-5, 755 1-4, 549 1-3, 506 1-2, 498 1-2, 106 1-1, 412 1-5, 581d 1-2, 704 1-4, 477 1-4, 444 1-3, 761 1-3, 735 1-4, 721 1-6, E. S. 1-5, 766 1-3, 458 1-5, 560 1-4, 705 1-3, 624 1-2; singles 560, 604, 624, 511, 211, 212, 622a, 721, 766, 378, 200, 70, 506. CHAS. A. ELY, Perrineville, N. J.

WANTED.—Cancelled Columbian and Confederate postage stamps. Highest cash price paid for same. Send list of what you have and I will make you an offer by return mail. Address, W. C. PICKENS, Livingston, Ala.

I WANT sets of 281, 286, 206, 308, 292, 724, and can offer 5, 311, 351, 368, 428, 549, 550, 684 and many more. J. N. CLARK, Saybrook, Conn.

SINGLE BARREL No. 12 shot gun with loading tools, \$5 cash. Send stamp. E. K. SHIPMAN, New Milford, Ill.

FIRST-CLASS eggs in sets to exchange for birds in the meat. MILTON C. HOWE, Monson, Mass.

30 Caliber Colt's Revolver, nickled. Ivory handle; cost \$10. Will exchange for Collecting Pistol, single barrel gun or offers. C. BARLOW, Santa Clara, Cal.

SETS, with data, of forty species, indigenous to Kentucky, season of 1893, for exchange. Send list and get mine. Address, T. D. WITHERSPOON, JR., Lock Box 97, Richmond, Ky.

WANTED.—Set of two eggs of Black Vulture, first-class with data. Will give \$ worth of first-class singles for same. WILL BINGAMAN, Grundy Centre, Iowa.

FOR SALE.—A fine set of two Golden Eagle, full data, for only \$7.50. Many other desirable sets cheap. Also 400 first-class bird skins. Send for list. L. ZELLNER, 1825 Oak St., Los Angeles, Calif.

TO EXCHANGE.—Two copies of the Geological Survey of Ohio, for Indian stone implements. Also some other useful books for same. Z. T. SMITH, Upur Sandusky, Ohio.

TO EXCHANGE.—Bull's eye lantern, 25 numbers each of Harper's and Century magazines for a pair of climbing irons or Indian relics with data. ARCHIE CROZIER, 810 W. Fifth St., Wilmington, Del.

TO EXCHANGE.—100 varieties U. S. and Foreign stamps in an International album (\$1) for Cones' Key or Ridgway's Manual. GEO. H. DAVIS, 129 Washington St., Painesville, Ohio.

TO EXCHANGE for Cones' Key and papers on Oology. A 32 cal self-cocking double-action revolver, as good as new, and a few sets of eggs. All answered. P. A. MULTER, Ashford, N. Y.

EXCHANGE.—Northern Illinois eggs for U. S. stamps. Send for stamp approval sheets at 50 per cent. commission. Reference required. I have a few good stamps for sale cheap. Correspondence invited. GEO. B. BRADSHAW, De Kalb, Illinois.

FOR EXCHANGE.—A pair of large Elk Antlers on Skull in good shape for Kodak Camera in good order and standard make, also eggs to exchange for minerals, shells and curios of all kinds. ALF. EASTGATE, Grand Forks, N. D.

TO EXCHANGE.—A. O. U. sets with data of 261 1-2, 305 2-11, 462 1-3, 466a 2-13, 467 1-4, 510 3-4, 511b 1-4 1-3, 560 1-3, 596 2-3, 581c 3-3, 613 2-4, 616 1-4, 604 1-2, 652 3-4, 705 1-4, 725 1-2. Also Youth's Companion for 1893 and N. Y. Ledger for 1891, for Hornaday's Taxidermy or other sets. All answered. CARLETON R. BALL, Little Rock, Iowa.

COLLECTORS.—I have practically a perfect contrivance for climbing trees, which I have successfully tested for several seasons. By its use the most difficult tree, regardless of shape, size or height, is rendered absolutely safe and easy to climb. Those who desire particulars will write me enclosing stamp. M. C. WHITE, Mathews, Va.

TO EXCHANGE.—First-class singles with complete datas, of this locality 50 per cent. discount, for first-class sets with datas, climbing irons or collecting tube. CHAS. WISE, York Station, Alabama.

THE OÖLOGIST is simply a hustler. I received my December number yesterday and today had 6 answers in the forenoon and 4 in the afternoon. And I say as no doubt hundreds of the OÖLOGIST's subscribers do, "Three cheers for the Oölogist." HORACE H. FELL, Chicago, Ill.

TO EXCHANGE.—I have 21 singles of Am. Herring Gull, which I will exchange for best offer of sets with data. I also have the following 1st class sets with data to exchange: A. O. U. No's 51a 10-3 16-2, 106 60-1, 519 1-4 1-5, 591b 1-3 1-4, 612 6-3 2-5, 710 8-3. Wanted in exchange sets with data. ORA WILLIS KNIGHT, 157 Hammond St., Bangor, Maine.

"BIRD LIFE IN LABRADOR."—Sometime ago I published a series of articles in the American Field of Chicago, Ill., entitled "Bird Life in Labrador." I received so many letters unsolicited, from those who had read and appeared pleased with these articles, that I determined to put them into a more permanent form. They will appear as a pamphlet of about 100 pages. To cover the slight expense of publication, I shall offer a limited number of them for sale, paper cover, post-paid, for \$1.00 each. I should be pleased to send you a copy upon the above terms. Sample page for stamp. Please address, WINFRID A. STEARNS, Atlanta University, Atlanta, Ga.

FOX SKIN:—If you have an A No. 1, one with skull and leg bones, advise us lowest cash or exchange price at an early date. F. H. LATIN & CO., Albion, N. Y.

SPECIMENS of Georgia Woods, Telea. Promethea and Cecropia Cocoons and 15 sets 498 for eggs, climbers, back OÖLOGISTS or Davie's Key. Also Shot Gun, Brass Shells, Loading Tools and 22 Rifle for Banjo. LEROY KING, 304 Forest W., Detroit, Mich.

FIRST-CLASS EGGS in sets to exchange for same. Send list. All answered. G. GORDON SHANCK, Libertyville, Ills.

EXCHANGE: Stoddard's Art Portfolio (256 pictures) size, 11x13 1/2 inches, cost \$4.00, of scenes around the world, for minerals, first class sets, or books on Natural History of any kind. CLARENCE NORTON, Three Rivers, Mich.

WANT old Nickels, any date back of 1885, will give 10 rare foreign stamps; back of 1879, 15; 1860, 25. OTTO GRADY, Ludlow, Ky.

EXCHANGE: 40 Books. Some very old and rare, novels, Cosmopolitan Magazine, 1891, 1892, Shot gun and Rifle combined, and Black Minorca Fowls and Eggs for Books on Ornithology, first-class Sets or Mounted Birds. All answered. VERDI BURTON, Branchport, N. Y.

FOR SALE—Bird Skins from this locality. Very cheap. Large orders taken. I would also exchange some very fine specimens for Cones' Key and Ridgeway's Manual, and Ridgeway's Nomenclature of Colors. Also other standard works on Ornithology. All letters answered. NATHAN L. DAVIS, Taxidermist, La Porte, Texas.

CAPEN'S OÖLOGY of New England. The edition of this magnificent work is exhausted, we have only one copy left. Price \$15. If you want it speak quick. F. H. LATTIN & CO., Albion, N. Y.

I HAVE added Two Hundred dollars (\$200) worth of specimens to my collection through the Exchange Columns of the OÖLOGIST. J. M. KILVINGTON, Mason City, Ia

I FIND that exc. notices in the OÖLOGIST pay me 100 per cent. better than in other papers. EDW. WALL, San Bernardino, Calif.

"BIRDS OF THE STATE OF NEW YORK, by DeKay. Complete in one thick volume. 4to, cloth, 380 pages, text, illustrated with 141 finely engraved full page plates, beautifully colored by hand, showing 308 figures. This work is very scarce. It was published in 1844, as one of the vols. of the "Natural History of New York" and is usually sold at from \$16 to \$25 per copy. This copy needs rebinding and has the common names of birds written underneath each figure—otherwise clean and in good condition. Our price, prepaid, only \$12. F. H. LATTIN & CO., Albion, N. Y.

I HAVE eggs of the Caspian Tern and American Herring Gull to exchange for Eggs, Skins, Curios, etc. ED VAN WINKLE, Van's Harbor, Mich.

OÖLOGISTS WANTED.—We want at once, copies of the OÖLOGIST as follows: July, August, 1886; January-February, 1887 or Dec., 1886, with the former attached; June, 1888; April, 1889; March, 1892 and April, 1893. We also desire copies of our old 1885 "OÖLOGIST'S HANDBOOK." For each and every copy of the above publications mailed us not later than February 15, 1894, we will give 15cts worth of anything we advertise or offer for sale or will send credit check good for the amount. Address at once, F. H. LATTIN & CO., Albion, N. Y.

EGGS.

From the *Orient* and *Assam* (Malakka) India Australia, Africa, etc., correctly named at moderate prices, also European and exotic Birds skins. HERMANN ROLLE, Emderner Str., 4, Berlin, N. W., Germany.



SEA SHELLS, Coral, Minerals, Birds' Eggs, and S ins. Fossils, Naturalists' Supplies, Taxidermy, Catalogue, 2c. C. F. CARR, New London, Wis.

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TAXIDERMISTS! I have just imported over 500 gro. of artificial leaves. I am now having a plate made and a list printed. If you think this list would interest you, I would be happy to mail you one. I'm now stocking up with the best material in the market and no doubt within a month I will have the finest stock of supplies in the country. If you are a live taxidermist, send me your address on a postal. JAMES P. BABBITT, Taunton, Mass.

The World's Fair Eggs.

We have left about one-half the eggs that we exhibited—mentioned in this OÖLOGIST as exhibited by "F. H. L. & Co."—at the World's Fair. In most cases these were the only eggs of the species ever within the bounds of Jackson Park and consequently the only ones at the World's Fair.

If you can use any of these eggs at not less and perhaps at a slight advance over regular rates we would be pleased to have your list of wants at earliest possible date and we will quote you lowest cash price for the ones we have left. With each set we will give a written guarantee that it was the identical one we exhibited at the World's Fair.

Address all letters referring to the "Exhibit" eggs to ALBION, N. Y.

F. H. LATTIN & CO.

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Bargains That are Bargains

We have decided to offer from time to time during 1891 a full page of desirable specimens, supplies, etc., at prices so low that although we purchased in immense quantities and at "snap" prices, our actual profit will be nothing or less than nothing. Future, rather than present, profits are what we are after and by giving our subscribers the benefit of this page we believe that we will secure through them, from an advertising standpoint results which, to us, will prove by far more satisfactory than could possibly be secured in any other manner.

All Prices on this page are open to 1894 Subscribers of the Oologist only. (If not already a subscriber you must send in your subscription or renewal with order.)

Prices will hold good until February 20th.—Not a single day longer and the articles in this months offer will doubtless never be included in a similar one.

Non-subscribers, and after Feb. 20th, subscribers can purchase these articles at Regular Price only.

Should present supply of this months bargains exhaust *before* Feb. 20th your money will be refunded.

In order to prevent dealers from "scooping" our stock and thus preventing subscribers, for whose benefit this page was planned, securing their wants, we shall be obliged to limit the purchase of each subscriber to not exceed \$10 during the month.

Everything is sent *prepaid* unless otherwise noted.

	Reg. Price	Jan. Sale Price
TAXIDERMIST'S SCISSORS, ordinary 5 in. ones.....	\$ 75	\$ 28
GREEN MOSS, imported, large brick bunches.....	20	09
DATA BLANKS, wide margins, per 100 assorted.....	25	08
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MINERAL COLLECTION of 50 different named, 1 in. specimens, 35 cts. additional if sent prepaid.....	1 25	50
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100 var. FOREIGN STAMPS.....	20	11
POPULAR STAMP ALBUM, illustrated, holds 1200 stamps.....	10	06
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SETS of 1-1 with data of each the following showy Sea Birds eggs: Sooty Tern, Noddy, California Murre and Leaches' Petrel and an egg of Am. Herring Gull.....	1 35	70
SET $\frac{1}{2}$ Ring-billed Gull and 1-5 Little Blue Heron.....	1 50	70
SET $\frac{1}{2}$ CHACHALACA.....	2 25	90
EGG OF So. African Ostrich, 35cts. additional if sent prepaid.....	1 50	75
THE OÖLOGIST, 1892, 268 pages, bound in cloth.....	1 00	60
GLASS EYES. All cut from wires and ready to insert in specimen. In our Januay sale we offer only colors and sizes as follows: Flints No's 3, 9, 10, 14, 19, 20, 22, 25 and 26. Red No's 1, 2, 3, 18 and 20. Brown, No's 17, 18 and 22. Hazel, No 1. Yellow, No's 1, 2, 3, and 9. Straw, No. 5.		

The prices of the above eyes, for THIS SALE ONLY, will be *one-half* regular ones viz: Sizes 1 and 2, 1c. per pair; 3 and 5, $1\frac{1}{2}$ c.; 9 and 10, 3c.; 14, 6c.; 17, 18 and 19, 10c.; 20, 12c.; 22, 14c.; 25, 18c. 26, 20c. All prepaid.

For anything on this page address us at either 3571 Cottage Grove Ave., CHICAGO, or ALBION, N. Y. Should you include your subscription to the OÖLOGIST with the order the latter address is preferable.

Faithfully,
F. H. LATTIN & CO.

Our Premium List for 1894.

With this months OOLOGIST, we mail our Premium List for 1894.

For each and every NEW subscriber you will send us, during 1894, you may select anything we describe or advertise upon its pages to the amount of 25c. Or, if you will send us an even \$1.00 we will send you goods described in the Premium List (your selection) to the amount of \$1.00 and will also mail your Friend the OOLOGIST one year with the coupons. Neither of these offers can be accepted in connection with a renewal of your own subscription, nor of that of an old subscriber.

In the Premium List, we think any collector will find many useful and desirable articles, and, taken as a whole, that a large percentage of the "trash" usually contained in such lists, has been, with perhaps a few exceptions, eradicated. Our patrons can rest assured that in case they should select an article, which we do not think will prove to their entire satisfaction, that we will either "even up" with "extras" or send a similar article of greater value.

If this List is of no earthly use to you, dont cast it in the fire—it's excellent for wrapping specimens—we've tried 'em.

Should you prefer Eggs or Specimens of any kind at regular list rates, you can make selections from our stock to the amount of 25c. instead of articles offered in our 1894 Premium List.

Trusting you will send in new subscriptions early and often, we remain as ever,
Faithfully Yours, F. H. LATTIN & CO.

Second Hand Books.

During the past few months the following 2d Hand or shelf worn books have accumulated at our Chicago store, rather than ship them back east we will send *prepaid* at the following ridiculously low prices. Should you desire further descriptions in relation to any special book or books before placing your order - write, or see JUNE 1893 OOLOGIST.

Principles of Zoology, Agassiz & Gould	\$ 60
Stories About Birds, M. & E. Kirby	1 00
Buffon's Natural History	40
Family Aquarium, Butler	50
Geological Sketches, Louis Agassiz, 2 vols.	2 00
Up and Down the Brooks, Mary E. Bamford, new	70
Patterson's Zoology	75
Primer of Scientific Knowledge, Bert, new	45
Gray's Structural and Systematic Botany, Asa Gray	1 75
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Boys Own Natural History, J. G. Wood	2 00
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Insects at Home, J. G. Wood	1 40
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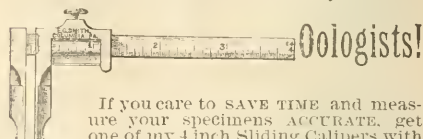
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The Magic City.

We would advise every reader of the OöLOGIST to avail themselves of the truly great offer made on the last page of this month's OöLOGIST.

The writer spent a portion of nearly every day, from June 1st until the close of the Fair on the grounds, and can truthfully say that these photographic representations, which we have been so fortunate as to obtain for our subscribers, are by far the best views of the great White City we have seen.

During the Fair sixteen views equal to the ones in Portfolio No. 1 could not have been purchased for less than 50 cents each and possibly not for double that amount, while every reader of the OöLOGIST can with coupon secure the entire 16 for only 10 cents.

The 16 Photographic views in Portfolio No. 1 are as follows:

Administration Building, Lapland Village, Chicago Day, East View from Macmonnie's, Manufactures and Fisheries Buildings, Woman's Building, Art Palace, Dahomey Cannibals, Government Building, Golden Portal of Transportation Building, The Peristyle and Statue of the Republic, Manufactures Building from Court of Honor, Bird's-eye View of the Fair, Peristyle (Detail view), Columbian Fountain, and Samoan Girls.

In the last mentioned view our readers will note the heavy necklace about the necks of the representative belles of Samoa, these were made of bright red cassia beans which we are highly suspicious came from our store. In this same village was shown a Samoan's boat trimmed or decorated with Tiger Cowries (*Cypræa tigris*) shells, which by the way were also furnished from the stock of F. H. L. & Co.

We want every reader of the OöLOGIST to see Portfolio No. 1, whether they conclude to take the following parts as issued or not and in order to place No. 1 in their hands we make the following propositions:

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THIS OÖLOGIST was mailed subscribers on Jan. 23d. February number will be mailed Feb. 5th. If you wish to catch it, send in your notices at once. If you have ordered the OöLOGIST discontinued since the Holidays, you will doubtless receive January number—but no future ones. The wrappers for January were addressed during holiday Season.

THE OÖLOGIST.

VOL. XI.

ALBION, N. Y., JAN., 1894.

NO. 1

Raptores of Michigan.

(SEVENTH PAPER)

BY SCOLOPAX.

SCREECH OWL; MOTTLED OWL; RED OWL, *Megascops asio*. This is one of our common owls, and many claim it is our most abundant representative of the family. The Red and Mottled Owls were at one time considered as distinct species; at a later period the red phase was allowed to be the immature plumage of the gray-coated bird. It is now generally admitted that the two are of a single species, and the subject of variations in color has been thoroughly studied of late. A paper in the American Naturalist, Vol. XVII, p. 521, 1893, gives the results of thorough study and much research by E. M. Hasbrouck. This study on the 'Evolution and Dichromatism of the Genus *Megascops*' is a very interesting paper, and those interested in the conditions which bring about variations in a species will be much pleased with the publication. There are maps and charts indicating the points where the red owls are alone found, where the gray owl is found and where they merge.

The Screech Owl, and he well deserves his name, is very generally distributed and everyone who has collected for any length of time has met with it. This bird can see plainly during the day, or at least well enough to readily escape from its pursuers when it is abroad. But generally it remains near to its home of the year, to which it seems much attached, and keeps in concealment during daylight, issuing at night to whine, screech and moan in the most remarkable and mysterious manner. This song or series of notes

is more commonly uttered in the nesting season, but it is also heard in the summer, autumn and even winter, and many a camper and inexperienced hunter has been badly frightened by the sounds.

Although this Owl is so well known the collectors do not appear to have had great success with nest hunting. Covert says that this Owl nests in Washtenaw county. A. E. Chambers found a nest in Kalamazoo county containing five eggs. This was in early May, 1878. A shallow cavity held the fresh eggs which were within four inches of the entrance. The tree was a dead ash stub eighteen inches in diameter at the base. The cavity was nine feet from the ground and was entered by a rude hole in the side of the trunk. The nest was composed of a very few feathers.

On two occasions when the spot was visited the old bird seemed loth to leave the cavity but when she took flight quickly disappeared and did not seem at all concerned. The eggs somewhat resembled those of the Kingfisher.

My friend Richard Westnedge gives me the following notes on nestings taken near Kalamazoo:

One nest in a large oak about 25 feet up. Entrance to hollow about five inches in diameter. Cavity contained the remains of a Bluebird and two Blackbirds. The five eggs, resting on rotten chips at bottom of hollow, were incubated a week or ten days. The date was April 17, 1890.

On May 13 of the same year he found another nest containing six well-grown birds. This cavity, evidently an old Woodpecker's nest, was at a height of ten feet. There was a Golden-winged Woodpecker's hole six feet above in the same stub which held seven eggs.

On May 7, 1892, he secured three bad-

ly incubated eggs from a cavity twenty feet up in a dead black ash.

Mr. Willhelm found the following nests: One on May 15, 1887, containing five young, nearly covered with feathers. In cavity in large oak near Kalamazoo, Mich.

On April 27, 1892, five eggs were taken from a cavity in a small dead beech.

A young Screech Owl which he took from the nest in the gray pin-feather plumage soon took on the red plumage. This Owl became quite a pet. Once a boy stole it from its cage and carried it fully a hundred rods away. After several days it escaped and at once returned to its rightful mother.

GREAT HORNED OWL, *Bubo virginianus* (Gmel.) Also known as big Cat Owl and Hoot Owl. The name Cat Owl is also applied to other species and is, from the resemblance of the eyes and tufts of feathers to the cat's head. Some ignorant country people believe that Cat Owls bear their young alive, and I have been repeatedly informed of this remarkable condition by unobservant falsifiers. Hoot Owl is a name applied to both this species as well as the Barred Owl.

The song, if we may call it so, of the Great Horned Owl is a repeated *hoot*. This note is not usually given more than four times at a period, and ordinarily only three times, as '*hoot hoot hoot*.' Often the notes are given but twice and at times only a single *hoot* is issued. Though called hoots I prefer to pronounce the noise '*who*', as the note certainly has not sound in it.

The song of this Owl, *who who who*, as it is generally uttered in the silence of the night is entirely different from the longer and more varied effort of the Barred Owl, though both are sonorous and sepulchral in tone. The Great Horned generally gives a *who* then skips a beat and then two *whos* in succession and quicker. This description

may be of slight advantage to those who are not versed in bird notes, but I am satisfied that all Owl observers can catch my meaning. When four *whos* are given the last two are alone uttered quickly, and generally when only two notes are given they are issued deliberately.

The Barred Owl's notes are a series of *whos*, generally four or five, with the last one long drawn out rising and falling and with a guttural chuckle in it. It may be readily recognized from this description.

The Horned Owl is the most powerful night prowler that we have. It is also cunning, and boid when necessity demands. As a resident it defies our coldest winter weather, and lays its eggs when most of Michigan's birds are still at the south.

It is said that the Snowy Owls and many other species of northern birds are driven south by the cold weather. I have never credited the theory of cold weather migrations as applied to the Snowy Owl, though it may be true. If it is so, I can attest to the superior ability of the Great Horned to withstand severe weather, for one reason when the Snowy Owls of the north were here in force and were reported from all over the country, our Horned Owls nested as usual in February. That year, I believe it was '78, eggs were taken on the eighteenth of February, and after this date the mercury went below zero several times. I have not a doubt but that young Horned Owls were hatched long before the Snowies thought of returning to their northern homes.

The earliest that Horned Owl's eggs have been taken hereabouts is February twelfth, while the birds nearly all lay their eggs before March tenth. In fact it is an unusual occurrence to secure fresh eggs after early March.

Way back in the centennial year the collectors of this city began collecting

Owls' eggs. There were seven or eight collectors in our place at that time, and two, B F. Sykes and Dennis Nolan, soon developed into excellent climbers with the irons. Together with the aid of F. H. Chapin they gathered twelve to fifteen complete sets of eggs within a few years and found many nests of young.

Then came other collectors; a new generation as we may say. For the last few years Dick and Joe Westnedge, George Judson and Kib. Willhelm have attended to the collecting of the Owls' and early Hawks' nests. There are other collectors who have dipped into this dangerous and difficult class of collecting, but they quickly dropped it after one season's work. The pecuniary remuneration is in no wise sufficient to tempt one to follow the business, and if one is not thoroughly in earnest as a collector he soon gives it up.

It would be difficult to hunt up the data of all the sets of Hoots taken in this (Kalamazoo) county, but a few of the more recent records are presented. The sites for the eggs must be located in January or early February and the birds watched. It was a common thing for Sykes to go collecting for Hoots' eggs when the snow was a foot or more deep in the woods and he has told me that he has found three or four inches of snow accumulated on the edges of those nests built in exposed situations.

Mr. Westnedge hands me the following notes on the nesting of this species, and in addition to these notes he has found nine instances where the young had already hatched.

In 1891 he secured a single set of three fresh eggs from a hollow in a large red oak in dense woods. The hollow was thirty feet from the ground and the date was Feb. 28th.

In 1892 he secured two sets of three on Feb. 20th. One set, fresh, was in a hollow maple about 25 feet up and at

the edge of the timber. The other set, advanced in incubation, was in an old Crow's nest 35 feet up and in open woods. This nest had no lining.

In 1893 he found four nests with eggs. On Feb. 20th a set of two incubated eggs in a cavity 50 feet from the ground in a large elm in heavy timber.

March 11th a set of two fresh eggs in old nest 60 feet from the ground in a beech in heavy timber. This nest was lined with leaves and a lot of feathers.

March 22nd, a nest in oak 30 feet up in dense forest. Held a single egg.

March 30th. A set of three about ready to hatch. Eggs in an old Hawk's nest about 50 feet up. Nest well lined.

Mr. Sykes informs me that he has taken five complete sets of eggs, with only two in each nest. Of these nests three were in hollows and two were the old nests of Buzzard Hawks. He also found several nests of young. He says the eggs are about as often laid in cavities as in nests of Crows and Hawks.

K. R. Willhelm who has taken a number of sets of eggs of two and three, has only found a few nests of the Great Horned Owl in hollows.

These notes of capture are very interesting to collectors. It will be seen that Mr. Willhelm found young birds in his first six nests and his work went for naught from 1886 to 1889 in this line. But although he was so unlucky in April and May of these years he was so fortunate as to take sixteen eggs in February and March, 1890 to '92 inclusive. This clearly shows that February is the month for Horned Owls' nests. Mr. Westnedge was very successful in securing nine eggs from his first three sets.

The note of young birds found on Feb. 23d is a remarkable one. Reasoning that this owl sets three weeks it necessarily follows that the first egg in this nest was laid on the twentieth of January or a little later.

Mr. Willhelm's notes on the Great

Horned Owls' nests in Kalamazoo county, unless stated otherwise:

April 27, 1886. Nest in large ash about 60 feet up, containing two young birds nearly ready to leave. Parts of moles and feathers of partridge in nest.

Apr. 9, '88. Nest in large oak near lake. Three young birds about two weeks old.

Apr. 24, '88. Nest in cavity of large elm at Parkville, St. Joseph Co. Two young birds in down. Chicken feathers numerous in cavity.

Apr. 2, '89. Large nest in top of oak. Two young birds. Remains of two Robins and one rabbit. Nest nicely lined with leaves and Owl's feathers.

Apr. 4, '89. Nest in large ash in swamp. Two birds nearly ready to leave nest.

May 5, '89. Nest in large oak. Woods near brook. Two young birds sitting on edge of nest.

Feb. 25, 1890. Nest of a few sticks and dead leaves, in large bass-wood in deep woods. Two eggs, advanced in incubation.

Feb. 26, '90. Large nest in top of oak. Nicely lined with owl's feathers. Three eggs; fresh.

March 1, '90. Nest in large oak, in woods. Two eggs; nearly fresh.

Feb. 22, '91. Nest in oak; nearly hidden from view. Two eggs; incubation advanced.

Feb. 23, '91. Two eggs; nearly fresh. Large sycamore in woods. Nicely lined with corn husks and owl's feathers.

Feb. 23, '91. Two young birds in down; cavity of oak. Nest a rather deep cavity in decayed wood; dead leaves and owl's feathers.

Feb. 23, 1892. Two eggs, from nest in large elm. Advanced in incubation. Nest nicely lined with moss and feathers.

Feb. 26, 1892. Three eggs, fresh. Nest in cavity of dead beech. Martin, Allegan Co., Partridge feathers and remains of rabbit in cavity.

I have read two or three times that the Owls and Red-tailed Hawks often occupied the same nest in turn each season. This is nonsense; for if the Owl's eggs were laid Feb. 20th the young would not leave the nest before May 1st, if as soon as that. This would hardly meet the requirements of the Hawk.

The Horned Owl is an excellent provider for his young and the variety of game and poultry which is brought in shows this marauder to be a pest in the neighborhood.

My friend Willhelm had two Horned Owls which he took alive from the nest when they were half size and in the half downy plumage. He kept them from year to year in a pen in the yard. They never seemed to suffer from the cold and generally seemed contented. In the early spring months they were slightly restless, but refused to construct a nest and lay, although material for a nest was given them. Meat and fish was their entire food and the number of bodies of skinned birds which they have devoured is past belief.

These Owls, raised from the nest in confinement, never had a chance to search for food, or to roam at liberty, and yet, although they were gentle and enjoyed being stroked, and emitted glad cries at the sight of their master, still they possessed the traits of ferocity and only waited an opportunity to show their true dispositions.

The chance came one night when escape was possible. Instead of flying to the woods they immediately entered a neighbors hen roost less than sixty rods distant where they mangled and killed twelve to fifteen chickens, one being a game cock, in a short time.

On hearing the uproar the owner of the hen house appeared and slew the male and closed the door on the female*. And now this savage bird is

* Mr. Willhelm says he is not sure that the birds were male and female and is inclined to think that they were both males, founding his belief on the fact that both birds hooted at times.

again behind the bars, literally in solitary confinement for her evil deeds. She seems discontented since the loss of her smaller mate, and sympathy may be expressed for the lonely Owl. However it is a question if the city raised Owl could get her living in the wild woods after three years of inactivity and never having received a parent's instruction in the art of hunting. It is barely possible, after the exhibition recorded above, that this Owl might learn in a short time. Therefore, as the owner does not want to pay for neighborhood poultry, and dislikes to kill the old pet, it remains necessary to keep *Bubo* in the solitary.

A Collecting Trip in Florida.

Leon Co., Fla. is thickly dotted with lakes and swamps. In about the center of the county, not far from Tallahassee, is a large cypress swamp nearly surrounded by lakes. This is indeed a collector's paradise!

It was to this place that my father, brother and I went, one beautiful morning early in June, to collect eggs and skins of the Little Blue Heron, which we heard were to be taken in abundance. We carried a No. ten duck gun and a large market basket, in which to bring home the spoils.

Before reaching the swamp we were obliged to pass over a narrow piece of land between two of the lakes and here in the bushes growing in the edges of the lakes we took three nests of the Red-winged Blackbird. These nests were composed of straw and wet marsh grass, which afterwards dries, holding the parts firmly together. A set of three eggs in my collection averages .95x.72 inches and are greenish white marked mostly on the larger end with straggling splashes and scrolls of black.

In a stunted cypress growing near the bank, we found an incomplete set of three eggs of the Orchard Oriole.

The nest was composed of grass and a few small pieces of cotton. The grass of which the nest was woven seems to have been procured while young and, although it is now three years old, still retains its green color. The eggs were greenish and marked very much like those of the Red-wings, averaging .75x.54.

A Loggerhead Shrikes nest was found which contained five eggs.

Proceeding on our way we found eggs of the Kingbird, Mockingbird and Fla. Bob-white. As we drew nearer to the swamp several species of Heron arose and directed their course toward its centre.

We arrived at the edge of the water which stood about waist deep among the cypresses in the swamp, and prepared to wade in. Everything was deathly still excepting the dog-like barking of the Herons and the hoarse croaking of the frogs. We had not advanced far until we came upon two nests of the Green Heron, one with four, the other with three beautiful green eggs. Still guided by the cries of the birds we waded through the mud and water, until in a short time we were in the midst of a colony of "cranes." By this intrusion we disturbed hundreds of birds, which rose a short distance in the air, flew in wider and wider circles, and then moved a short distance from the spot. Then we looked around us. The water was covered with water lilies and their foliage, or "bonnets" as they are called in Florida, while the trees above us, very thick, contained three or four nests each, were heavily draped with Spanish Moss, which made it rather gloomy beneath. The nests were chiefly those of the Little Blue Heron, Black-crowned Night Heron and Anhinga, while on the outskirts of the Colony were nests of the Green Heron and Grackle.

The nests of the Little Blue, as well as those of the Green Heron, were light

structures, composed of dry sticks placed so loosely as to admit light through them; in fact we rarely climbed to a nest without first having seen eggs in it from below. The adult bird is of a dark blue color. They do not attain this plumage until the third year, being pure white when young. We saw many birds half blue and half white most probably about two years old, which we then mistook for hybrids of the Little Blue and Snowy species.

The eggs are uniformly light blue, about 1.70x1.30.

We found thirteen nests of the Anhinga. I believe these birds are not in the habit of building a new nest each year, but simply adding to the old one, so that in the course of two or three seasons the nest becomes a very dirty, as well as a bulky affair. The eggs are a dirty chalky color, which when scraped off, discloses a beautiful blue. they are usually four, rarely five in number. On account of the shyness of these birds we were unable to shoot any.

Hearing a whirr of wings we looked up and saw a flock of birds flying, like geese, in a V. We fired into the drove and brought down three fine ones, which proved to be White Ibises, two males and a female. As far as I was able to learn these birds did not breed in that section.

We had now a good load: upwards of one hundred eggs, a number of birds, and seven young live Herons—little beauties. It was getting very dark underneath the thick foliage overhead, so we started home where we reached about 9 p. m. tired and dirty.

The young Herons remained with us about a week, feeding with the chickens, then wandered off and we never saw them afterwards.

W. H. DEADRICK,
Clarksville, Tenn.

THE OÖLOGIST.

A Monthly Magazine Devoted to
OÖLOGY AND ORNITHOLOGY.

F. H. LATTIN, & CO., Publishers.
ALBION, N. Y.

FRANK H. LATTIN, WALTER F. WEBB,
Editors.

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. Articles, Items of Interest and Queries for publication should be forwarded as early in the month as possible.

ENTERED AT THE POST OFFICE AT ALBION, N. Y., AS SECOND-CLASS MATTER.

"Birds of Western New York."

Mr. Ernest H. Short of Chili, N. Y. writes us as follows:

I have received a number of inquiries as to where, and at what price my recently published list of the Birds of Western New York could be procured; I hereby announce that upon receipt of 10 cents in stamps I will mail a copy to any address.

Western Warbling Vireo.

This active little bird is quite common in Benton County, Oregon. I think this is the same as the eastern Warbling Vireo, only it has not paid so much attention to dress since it came west and its coat has turned paler, but I do not think that is any reason why ornithologists should say it is not like its brothers and sisters in the east. To me it is one of the most interesting species. It is a great pleasure to sit on the mossy bank of a stream in a maple wood under the wide spreading branches of a tree, with the June sun making little spots of gold where it breaks through the branches and nothing breaks the silence but the songs of the birds mingled with the rippling of the water as it dances over a fallen limb or stone. As one looks up through the bright green foliage, he sees something to complete his enjoyment. It is a Warbling Vireo, flitting through the branches, warbling its exquisite little melody as it peeps under the leaves and limbs for insects. If one will keep his eyes on it he will presently see it with something in its bill. It will flit from limb to limb till it comes to its nest and then it will quickly deposit the material that it has gathered. Then it flits away again in the same fashion. If you fail to locate the nest and do not see what it did with the material watch it again. It will soon bring more material for its nest and you will be more apt to find the nest than you were the first time, for you will know about where it is. If you watch it closely the first time, you will rarely have to watch it the second. Most birds are very shy when they are building, and when one does see them with material for their nests, they fly so far that one cannot keep track of them.

This Vireo is not at all shy and will come quite close without seeming to notice one, but when it is disturbed it

will set up a *ch-ee* and it will some times follow one repeating *ch-ee* over and over. I once watched a Vireo go to its nest, or rather what looked like a forked limb with a spider's web on it. At first I thought the bird had gone there to get some of the web for her nest, but she worked at it a moment and flew away without it. In a little while she returned with something in her bill and left it there. I concluded that I would visit that spider's web again, which I did in twelve days, but instead of a spider's web there was a nice nest which contained three slightly incubated eggs. I have found a good many nests of this species and all of them but two were found by watching the birds go to them. I have found three nests, in maple shade trees in town. One of them was about ten feet from the ground and was directly over a public side-walk where people frequently passed. I have also found them in the deep forest far from the habitation of man.

I think the best time to look for eggs is the middle of June or a little earlier. The nest is made of cow hair, bits of paper, strips of grass, bits of yellow-jackets nests and any soft cottony substance that the bird can get. It is lined with fine round grass and is nearly always placed on the lower limb of a maple, from six to twenty-five feet from the ground. It is hung to a fork about the size of those used by boys for slingshots. The eggs are pure white, sparingly spotted around the larger end with several shades of brown varying from dark to reddish-brown. Spots are sometimes scattered over the entire surface becoming thinner and smaller as they near the smaller end. The number of eggs in a set is usually four. I have only found one set of three and none of five. A set measures .74x.54, .74x.53, .75x.56, .73x.53.

WADE H. PILES,
Sunny View, Oregon.

Prize Contests.

The "best article" and "Judges" contests which have proven so popular during the past two years will be continued through 1894. The scheme will, however, be changed and the winners can have CASH, SUPPLIES OR SPECIMENS as they may prefer in place of a 'set' list of prizes as heretofore.

Full particulars next month. Send in your miss. (not too lengthy) and votes early and monthly. The effort will amply repay you and if you stick to it you will surely secure valuable prizes which you may consider a more acceptable form of remuneration.

Publishers of THE OÖLOGIST.

A Wilson Ornithological Chapter of the A. A.

The December election of officers resulted as follows: President, Willard N. Clute, Binghamton, N. Y.; vice pres., Reuben M. Strong, Oberlin, O.; sec., William B. Caulk, Terre Haute, Ind.; treas., Lynds Jones, Oberlin, O.

The Chapter is in a very flourishing condition with seventy-three active, four honorary and thirty-one associate members. The members have devoted the past year to a special study of the Warblers, and the forthcoming report promises to make a very interesting paper. Any information regarding the Chapter will be cheerfully furnished by the secretary.

A new would be patron desires a "cattle-lougne and sample copy of the OÖLOGIST."

I have taken the OÖLOGIST ever since it was born and could not get along without it. Yours truly,

VERDI BURTCHE, Branchport, N. Y.

"Summer Birds of Greene County, Penna."

At our request Mr. J. Warren Jacobs of Waynesburg, Pa. informs us that he can spare a few copies of this valuable booklet at 30 cents per copy.

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544.
- 11 J. P. Feagler, Waterloo, Ind.
284.
- 12 H. G. Hoskin, Beloit, Colo.
358, 487.
- 13 Ellis F. Hadly, Dayton, Ore.
212, 311, 312, 426, 448, 466, 619.
- 14 W. C. Johnson, Center Rutland, Vt.
403, 439, 468, 502.
- 15 A. E. Kibbe, Mayville, N. Y.
536, 540.
- 16 Chas. R. Keyes, Mt. Vernon, Ia.
146, 239, 250, 478.
- 17 John Larsen, Chicago, Ill.
135, 593.
- 18 F. Theo. Miller, Lancaster, C.H.Va.
261, 273.
- 19 R. B. McLaughlin, Statesville, N. C.
512.
- 20 W. H. Olney, Poland, O.
167, 174, 197, 238, 298, 663, 399.
- 21 A. L. Pope, McMinnville, Ore.
192, 198, 369, 455, 666, 475, 519,
595.
- 22 Wm E. Pierce, St. Johnsbury, Vt.
353.
- 23 Frank H. Shoemaker, Hampton Ia.
205.
- 24 J. M. Swain, E. Wilton, Me.
168, 240, 506, 527, 529, 532, 537.
- 25 A. L. Stevens, Northampton, Mass.
124.
- 26 Percy A. Smith, Lyndonville, N. Y.
313.
- 27 W. A. Strong, Tulare, Calif.
407, 508.
- 28 Ed. Van Winkle, Van's Harbor, Mich.
41-45, 51, 52.

- 29 H. W. Isaacs, Niagara Falls, N. Y.
83, 103, 163, 258, 315, 376, 491, 525.
- 30 Fred Jones, Martin's Ferry, O.
9, 53, 126, 133, 150, 151, 162, 287,
289, 323, 437, 456, 554, 591.
- 31 P. B. Peabody, Owatonna, Minn.
136, 249, 344, 345, 486, 514, 606.
- 32 W. S. Ferguson, Walla Walla, Wash.
359.
- 33 B. S. Bowdish, Phelps N. Y.
161, 311, 417, 419, 496, 510.
- 34 Clarence Trenholtz, Petaluma, Calif.
16, 194, 340, 371.
- 35 W. I. Comstock, Norwalk, Conn.
253, 331, 467, 489, 549, 551.
- 36 F. M. Richards, Farmington, Me.
434, 528, 533, 588.
- 37 E. E. Johnson, Lewiston, Me.
329, 458, 543.
- 38 F. H. Nutter, Minneapolis, Minn.
165, 276.
- 39 W. A. Davidson, Detroit, Mich.
286.
- 40 T. G. Pearson, Guilford College, N.C.
49, 122, 145, 283, 320, 377, 420, 509,
590, 555.
- 41 A. R. Ogden, Brocton, N. Y.
128.
- 42 H. H. & C. S. Brimley, Raleigh, N.C.
158, 461, 462, 535, 538, 552, 569.
- 43 Jas. A. Lyon, Jr., Clarksville, Tenn.
229, 232.
- 44 H. B. Stabler, Sandy Spring, Md.
235.
- 45 F. C. Willard, Galesburg, Ill.
347, 427.
- 46 J. H. Langille, Kensington, Md.
319.
- 47 B. O. Longyear, Mason, Mich.
348, 400, 526, 545.
- 48 R. P. Gillespie, Starkville, Miss.
248, 482.
- 49 J. E. Houseman, Aylmer, Ont.
243, 247, 618.
- 50 Harvey Hall, Riverside, Calif.
307, 550, 596.
- 51 F. A. Schneider, College Park, Calif.
12, 15, 18, 20-30, 39, 95, 103, 109,
110, 563.
- 52 T. A. Smithwick, Walke, N. C.
503, 513, 520, 524, 534, 582, 594, 607.
- 53 J. S. & A. Pyfer, Odell, Neb.
170, 188, 237, 497.
- 54 W. C. Pelton, Dickinson, S. D.
266, 564.
- 55 Ralph Arnold, Pasadena, Calif.
257, 457, 492, 573.
- 56 Stephen Rozycki, Washington, D. C.
183, 324, 343, 474.
- 57 Chas. E. Husk, Shabbona, Ill.
362, 415.
- 58 B. G. Boyd, Mayfield, Ky.
330, 539, 548, 583.
- 59 J. W. Nichols, Somonauk, Ill.
5, 142, 153, 159, 182, 228, 244, 252,
275, 295, 296, 333, 363, 406, 414,
429, 430, 432, 441, 444, 664, 451,
452, 470, 515, 562, 566, 571, 669.
- 60 V. F. L. Mueller, Milwaukee, Wis.
107, 137, 144, 342, 431, 433, 440,
443, 597.
- 61 W. S. Cobleigh, Canton, Ill.
160, 297, 354.
- 62 Frank B. Eastman, Easton, Md.
272, 292, 378.
- 63 W. J. B. Williams, Holland Pat't N. Y.
306.
- 64 E. V. Phinney, Ft. Scott, Kan.
193.
- 65 R. A. Campbell, Hanover, N. H.
6, 32, 61, 251, 310, 651, 657, 346,
521, 523, 587.
- 66 D. S. Musser, Anderson, Ind.
13, 14, 19, 34, 36, 38, 56, 80, 84, 106,
110, 111, 114, 207.
- 67 D. C. Bigford, Chicago, Ill.
351, 355.
- 68 D. Biggar, Fulton, Wis.
4.
- 69 J. S. Griffing Cutchogue, N. Y.
465.
- 70 Chester Irvine, Georgetown, Tex.
267.
- 71 W. H. Osgood, San Jose, Calif.
259, 360, 560, 599, 608, 609.
- 72 Horace A. Gaylord, Pasadena, Calif.
274, 332, 662, 652, 655, 656, 504, 565,
603.
- 73 H. R. Painton, College Park, Calif.
589, 592.
- 74 C. A. Proctor, Hanover, N. H.
119, 195, 668, 368, 370, 572, 438, 567.
- 75 H. D. Watts, Compton, Calif.
365, 473, 542, 561, 572.
- 76 W. H. Parker, Salt Lake City, Utah.
661.
- 77 Ernest H. Short, Chili, N. Y.
546.

The Exhibit.

- Sets No. 1-2 St. Domingo Grebe. 1-5
1-5. Exhibited by F. H. L. & Co.
- 3 Pied-billed Grebe, 1-7, No. 5.
- 4 Horned Grebe, 1-7, No. 68.
- 5-6 Loon. 1-2, No. 59; 1-2, No. 65.
- 7-8 Black-throated Loon. 1-2, 1-2. F.
H. L. & Co.
- 9 Red-throated Loon. 1-2, No. 30.
- 10-11 Large-billed Puffin. 2-1. F. H.
L. & Co.
- 12-13 Tufted Puffin, 1-1, No. 51; 1-1,
No. 66.
- 14 Puffin, 1-1, No. 66
- 15-16 Cassin's Anklet, 1-1, No. 51; 1-1,
No. 34.
- 17 Black Guillemot, 1-1, F. H. L. & Co.
- 18-19 Pigeon Guillemot, 1-2, No. 51;
1-2, No. 66.
- 20-30 California Murre, 11-1, No. 51.

- 31 Great Auk (Cast), 1-1, F. H. L. & Co.
 32 Parasitic Jaeger, 1-2, No. 65
 33 Long-tailed Jaeger, 1-2, F. H. L. & Co.
 34 Kittiwake, 1-3, No. 66.
 35 Glaucous Gull, 1-3, F. H. L. & Co.
 36 Great Black-backed Gull, 1-3, No. 66.
 37 Iceland Gull, 1-3, F. H. L. & Co.
 38-39 Western Gull, 1-2, No. 66; 1-3 No. 51.
 40 Herring Gull, 1-3, F. H. L. & Co.
 41-45 American Herring Gull 5-3, No. 28
 46 Ring-billed Gull, 1-3, No. 7.
 47-48 Mew Gull, 1-2, 1-2, F. H. L. & Co.
 49 Laughing Gull, 1-3, No. 40.
 50 Franklin's Gull, 1-3, F. H. L. & Co.
 51-52 Caspian Tern, 1-3, 1-3, No. 28.
 53 Royal Tern, 1-2, No. 30.
 54-55 Cabot's Tern, 1-3, 1-3, F. H. L. & Co.
 56 Forster's Tern, 1-3, No. 66.
 57 Common Tern, 1-3, F. H. L. & Co.
 58-59 Arctic Tern, 2-3, F. H. L. & Co.
 60 Roseate Tern, 1-3, F. H. L. & Co.
 61 Least Tern, 1-3, No. 65.
 62-67 Sooty Tern, 6-1, F. H. L. & Co.
 68-73 Bridled Tern, 6-1, F. H. L. & Co.
 74-79 Noddy Tern, 6-1, F. H. L. & Co.
 80 Gull-billed Tern, 1-3, No. 66.
 81 Black Tern, 1-4, F. H. L. & Co.
 82 Yellow-nosed Albatross, 1-1, F. H. L. & Co.
 83 Wandering Albatross, 1-1, No. 29.
 84 Black Skimmer, 1-4, No. 66.
 85-86 Fulmar, 2-1, F. H. L. & Co.
 87-88 Manx Shearwater, 2-1, F. H. L. & Co.
 89-90 Audubon's Shearwater, 2-1, F. H. L. & Co.
 91 Stormy Petrel, 1-1, F. H. L. & Co.
 92-94 Leach's Petrel, 3-1, F. H. L. & Co.
 95 Ashy Petrel, 1-1, No. 51.
 96-98 Gannet, 3-1, F. H. L. & Co.
 99-102 Booby, 4-1, F. H. L. & Co.
 103-105 Yellow-billed Tropic Bird, 1-1, No. 29; 2-1, F. H. L. & Co.
 106 Double-crested Cormorant, 1-3, No. 66.
 107-108 Farrallone Cormorant, 1-4, No. 60; 1-5, No. 51.
 109 Brandt's Cormorant, 1-4, No. 51.
 110 Baird's Cormorant 1-5, No. 51, 1-2, No. 66.
 111 Cormorant, 1-2, No. 66.
 112-113 American White Pelican, 1-2, 1-3, F. H. L. & Co.
 114 Brown Pelican, 1-3, No. 66.
 115-116 Man-o'-War Bird, 2-1, F. H. L.
 621 Hooded Merganser, 1-4, F. H. L. & Co.
 117 Shoveler, 1-6, F. H. L. & Co.
 118 Widgeon, 1-7, F. H. L. & Co.
 119 Canvas-back, 1-9, No. 74.
 120 Gadwall, 1-7, F. H. L. & Co.
 121 Barrow's Golden-eye, 1-7, F. H. L. & Co.
 122 Wood Duck, 1-13, No. 40.
 123 Northern Eider, 1-5, F. H. L. & Co.
 124 European Teal, 1-7, F. H. L. & Co.
 125 Cinnamon Teal, 1-11, F. H. L. & Co.
 126 Blue-winged Teal, 1-8, No. 30.
 127 Canada Goose, 1-5, F. H. L. & Co.
 128-129 American Flamingo, 1-1, No. 41
 1-1, F. H. L. & Co.
 130-131 Wood Ibis, 2-4, F. H. L. & Co.
 132 White-faced Glossy Ibis, 1-4, F. H. L. & Co.
 133 White Ibis, 1-3, No. 30.
 134 American Bittern, 1-4, No. 25.
 135 Least Bittern, 1-6, No. 17.
 136-137 Great Blue Heron, 1-5, No. 31; 1-5, No. 60.
 138 Great White Heron, 1-3, F. H. L. & Co.
 139-140 Reddish Egret, 1-2, 1-4, F. H. L. & Co.
 141 European Blue Heron, 1-3, F. H. L. & Co.
 142 Snowy Heron, 1-4, No. 59.
 143 American Egret, 1-3, F. H. L. & Co.
 144 Louisiana Heron, 1-3, No. 60.
 145 Little Blue Heron, 1-5, No. 40.
 146 Green Heron, 1-6, No. 16.
 147-148 Black-crowned Night Heron, 1-5, 1-5, F. H. L. & Co.
 149 Yellow-crowned Night Heron, 1-3, F. H. L. & Co.
 150 Limpkin, 1-6, No. 30.
 151 Sandhill Crane, 1-2, No. 30.
 152 Purple Gallinule, 1-4, F. H. L. & Co.
 153-155 Florida Gallinule, 1-8, No. 59; 1-9, No. 5; 1-4, F. H. L. & Co.
 156 European Coot, 1-8, F. H. L. & Co.
 157 American Coot, 1-7, F. H. L. & Co.
 158 Black Rail, 1-6, No. 42.
 159-160 Sora Rail, n-6, No. 59; 1-12, No. 61.
 161 Virginia Rail 1-11, No. 33.
 162 Northern Phalarope, 1-4, No. 30.
 163-164 Red Phalarope, 1-4, No. 29; 1-2, F. H. L. & Co.
 165 American Woodcock, 1-3, No. 38.
 166 Black-necked Stilt, 1-4, F. H. L. & Co.
 661 American Avocet, 1-4, No. 76.
 167 Spotted Sandpiper, 1-4, No. 20.
 168-170 Bartramian Sandpiper, 1-4, No. 24; 1-4, No. 53; 1-4, F. H. L. & Co.
 171 European Snipe, 1-4, F. H. L. & Co.
 172 Dunlin, 1-4, F. H. L. & Co.
 173 Willet, 1-4, F. H. L. & Co.
 174 Killdeer, 1-4, No. 20, 1-4, F. H. L. & Co.
 175 American Golden Plover, 1-2, F. H. L. & Co. Collected by R. McFarlane.
 176-177 Golden Plover, 1-4, No. 59, 1-4, F. H. L. & Co.
 178-179 Long-billed Curlew, 2-4, F. H. L. & Co.

- 180-181 Lapwing, 2-4, F. H. L. & Co.
 182 Snowy Plover, 1-3, No. 59.
 183 Wilson's Plover, 1-3, No. 56.
 184 Turnstone 1-4, F. H. L. & Co.
 185 Whimbrel, 1-3, F. H. L. & Co.
 186 American Avocet, 1-2, F. H. L. & Co.
 187 Oyster-catcher, 1-3, F. H. L. & Co.
 188 Bob-white, 1-20, No. 53.
 189-190 Florida Bob-white, 1-9, 1-14, F. H. L. & Co.
 191 Texan Bob-white, 1-13, F. H. L. & Co.
 192 Sooty Grouse, 1-9, No. 21.
 193-194 California Quail, 1-8, No. 64; 1-15, No. 34.
 195 Valley Partridge, 1-15, No. 74.
 196 Chestnut-bellied Scaled Partridge, 1-8, F. H. L. & Co.
 197 Ruffed Grouse, 1-8 and 1 hen, No. 20. This set of eight eggs, contained one egg of the Domestic Hen. The nest was found near a farmhouse.
 198 Oregon Ruffed Grouse, 1-13, No. 21.
 199-201 Willow Ptarmigan, 2-10, 1-11, F. H. L. & Co.
 202-203 Rock Ptarmigan, 1-5, 1-11, F. H. L. & Co.
 204 Columbian Sharp-tailed Grouse, 1-8, F. H. L. & Co.
 205 Prairie Hen, 1-15, No. 23.
 206 Gray Ruffed Grouse, 1-7, F. H. L. & Co.
 207 Wild Turkey, 1-4, No. 66.
 208-211 Chachalaca, 4-3, F. H. L. & Co.
 212-214 Red-billed Pigeon, 1-1, No. 13; 2-1, F. H. L. & Co.
 215-217 White-crowned Pigeon, 3-2, F. H. L. & Co.
 218 Passenger Pigeon, 1-1, F. H. L. & Co.
 219-222 White-winged Dove, 4-2, F. H. L. & Co.
 223-224 White-fronted Dove, 2-2, F. H. L. & Co.
 225-226 Mourning Dove, 2-2, F. H. L. & Co.
 227 Mexican Ground Dove, 3-2, F. H. L. & Co.
 228 Ground Dove, 1-2, No. 59.
 229-231 Black Vulture, 1-2, No. 43; 2-2, F. H. L. & Co.
 232-235 Turkey Vulture, 1-2, No. 1; 1, 2, No. 43; 1-2, No. 44, 1-2, F. H. L. & Co.
 236 Mississippi Kite, 1-2, F. H. L. & Co.
 237 Marsh Hawk, 1-5, No. 53.
 238-239 Cooper's Hawk, 1-4, No. 8; 1-5, No. 16.
 240 Sharp-shinned Hawk 1-3, No. 24
 241-242 Harris's Hawk, 1-3, 1-4, F. H. L. & Co.
 243-244 Red-tailed Hawk, 1-4, No. 49; 1-4, No. 59.
 245-246 Western Red-tail, 2-2, F. H. L. & Co.
 247 Red-shouldered Hawk, 1-2, No. 49.
 248 Florida Red-shouldered Hawk, 1-2, No. 48.
 249 Krider's Hawk, 1-2, No. 31.
 250 Swainson's Hawk, 1-3, No. 16.
 251 Zone-tailed Hawk, 1-2, No. 65.
 252-254 Broad-winged Hawk, 1-4, No. 59; 1-3, No. 35; 1-2, F. H. L. & Co.
 255-256 White-tailed Hawk, 2-2, F. H. L. & Co.
 669 Rough-leg, 1-2, No. 59.
 257 Ferruginous Rough-leg, 1-2, No. 55.
 258-259 Golden Eagle, 1-2, No. 29; 1-1, No. 71. This was a runt egg, about the size of a Red-shouldered Hawk. Heavily blotched Quite spherical.
 260 Gray Sea Eagle, 1-3, F. H. L. & Co.
 261 Bald Eagle, 1-2, No. 18.
 262-263 Kestrel, 2-5, F. H. L. & Co.
 264 American Sparrow Hawk, 1-4, F. H. L. & Co.
 265 Desert Sparrow Hawk, 1-5, F. H. L. & Co.
 266 Prairie Falcon, 1-3, No. 54.
 267-271 Audubon's Caracara, 1-2, No. 70. A very odd marked set. 2-3, 2-4, F. H. L. & Co.
 272-273 American Osprey, 1-3, No. 62; 1-4, No. 18.
 274-275 American Barn Owl, 1-6, No. 72; 1-4, No. 59.
 276 American Long-eared Owl, 1-6, No. 38.
 277 Screech Owl, 1-3, F. H. L. & Co.
 278 Florida Screech Owl, 1-4, F. H. L. & Co.
 662 California Screech Owl, 1-5, No. 72
 279-280 Texan Screech Owl, 2-4, F. H. L. & Co.
 281 Kennicott's Screech Owl, 1-4, F. H. L. & Co.
 282 Barred Owl, 1-2, F. H. L. & Co.
 283 Florida Barred Owl, 1-2, No. 40.
 284-285 Great Horned Owl, 1-3, No. 11; 1-3, F. H. L. & Co.
 286 Saw-whet Owl, 1-5, No. 39.
 287 Burrowing Owl, 1-9, No. 30.
 288 Florida Burrowing Owl, 1-1, F. H. L. & Co.
 289-291 Road-runner, 1-7, No. 30; 1-4, 1-5, F. H. L. & Co.
 292-293 Belted Kingfisher, 1-6, No. 62; 1-7, No. 20.
 294-295 Black-billed Cuckoo, 1-4, No. 6; 1-5, No. 59.
 296-297 Yellow-billed Cuckoo, 1-3, No. 59; 1-6, No. 61.
 298 Downy Woodpecker, 1-4, No. 20.
 299-300 Baird's Woodpecker, 2-4, F. H. L. & Co. One set contained a runt egg.

- 301-302 Hairy Woodpecker, 1-3, 1-4, F. H. L. & Co.
 303-304 Golden-fronted Woodpecker, 2-6, F. H. L. & Co.
 305 Williamson's Sapsucker, 1-4 F. H. L. & Co.
 306 Yellow-bellied Sapsucker, 1-5, No. 63.
 307 Nattall's Woodpecker, 1-5, No. 50.
 308 Red-bellied Woodpecker, 1-4, F. H. L. & Co.
 309 Pileated Woodpecker, 1-3, F. H. L. & Co.
 310 Lewis's Woodpecker, 1-7, No. 65.
 311 Red-naped Sapsucker, 1-6, No. 13.
 312 Red-shafted Flicker, 1-7, No. 13.
 313 Flicker, 1-7, No. 26.
 314 White-headed Woodpecker, 1-4, F. H. L. & Co.
 315-317 Merrill's Parakee, 1-2, No. 29; 2-2, F. H. L. & Co.
 318-319 Whip-poor-will, 1-2, No. 9; 1-2, No. 46.
 320 Chuck-will's-widow, 1-2, No. 40.
 321 Ani, 1-3, F. H. L. & Co.
 322 Poor-will, 1-1, 1-2, F. H. L. & Co.
 323 Nighthawk, 1-2, No. 30.
 324 Western Nighthawk, 1-2, No. 56.
 325-327 Texan Nighthawk, 3-2, F. H. L. & Co.
 328 Florida Nighthawk, 1-2 F. H. L. & Co.
 329 Chimney Swift, n-4, No. 37.
 330-331 Ruby-throated Hummingbird, n-2, No. 58; n-2, No. 35.
 332-334 Anna's Hummingbird, n-2, No. 72; n-2, No. 59; n-2, F. H. L. & Co.
 351-652 Black-chinned Hummingbird, n-2, No. 65; n-2, No. 72.
 653-654 Rufous Hummingbird, 2n-2, F. H. L. & Co.
 655 Costa's Hummingbird, n-2, No. 72.
 656 Buff-bellied Hummingbird, n-2, F. H. L. & Co.
 657 Calliope Hummingbird, n-2, No. 65.
 658 Scissor-tailed Flycatcher, 1-4, F. H. L. & Co.
 659 Kingbird, 1-4, F. H. L. & Co.
 660-335 Arkansas Kingbird, 2-3, F. H. L. & Co.
 336-337 Cassin's Kingbird, 1-4, 1-5, F. H. L. & Co.
 338, 663 Crested Flycatcher, 1-5, No. 3, 1-6, No. 20.
 339 Mexican Crested Flycatcher, 1-5, F. H. L. & Co.
 340 Ash-throated Flycatcher, 1-5, No. 34.
 341 Phoebe, 1-5, No. 33.
 342 Say's Phoebe, 1-6, No. 60.
 343 Black Phoebe, 1-4, No. 56.
 344 Wood Pewee, n-5, No. 31.
 345-346 Western Wood Pewee, F. H. L. & Co. n-4, No. 65. n-5.
 347 Traill's Flycatcher, n-4, No. 45.
 348-349 Acadian Flycatcher, 1-3, No. 47; 1-3, F. H. L. & Co.
 350 Western Flycatcher, 1-2, F. H. L. & Co.
 351 Little Flycatcher, 1-3, No. 67.
 352 Yellow-bellied Flycatcher, 1-4, F. H. L. & Co.
 353 Least Flycatcher, n-5, No. 22.
 354 Skylark, 1-5, No. 61.
 355-356 Prairie Horned Lark, 1-4, No. 67; 1-4, F. H. L. & Co.
 357 Ruddy Horned Lark, 1-4, F. H. L. & Co.
 358 Desert Horned Lark, 1-3, No. 12.
 359 American Magpie, 1-6, No. 32.
 360-361 Yellow-billed Magpie, 1-9, No. 71; 1-6, No. 2.
 362-364 Blue Jay, n-5, No. 57; 1-5, No. 59; 1-5, F. H. L. & Co.
 668 Canada Jay, 1-4, No. 74.
 365 Florida Jay, 1-5, No. 75.
 366 Florida Blue Jay, 1-5, F. H. L. & Co.
 367-368 Blue-fronted Jay, 1-4, No. 2; 1-4, No. 74.
 369 Steller's Jay, 1-5, No. 21.
 370 Arizona Jay, 1-5, No. 74.
 371 California Jay, 1-5, No. 34.
 372 Woodhouse's Jay, 1-4, No. 74.
 373-375 Green Jay, 1-4, 1-5, n-4, F. H. L. & Co.
 376 White-necked Raven, 1-6, No. 29.
 377-378 Fish Crow, 1-5, No. 40; 1-5, No. 62.
 379-382 American Crow, 4-5, F. H. L. & Co.
 383 Florida Crow, 1-5, F. H. L. & Co.
 384-389 Cowbird, 6-1, F. H. L. & Co.
 390 Dwarf Cowbird, 1-1, F. H. L. & Co.
 391-396 Bronzed Cowbird, 6-1, F. H. L. & Co.
 397-398 Yellow-headed Blackbird, 2-4, F. H. L. & Co.
 399-400 Bobolink, 1-5, No. 20; n-5, No. 47.
 401-402 Starling, 1-4, 1-5, F. H. L. & Co.
 403 Red-winged Blackbird, n-5, No. 14.
 404 Bicolored Blackbird, 1-4, F. H. L. & Co.
 405 Tricolored Blackbird, 1-5, F. H. L. & Co.
 406 Meadowlark, 1-5, No. 59.
 407-408 Western Meadowlark, 1-4, No. 27, 1-4, F. H. L. & Co.
 409-410 Audubon's Oriole, 1-4, 1-4, F. H. L. & Co. Heavily blotched.
 411-413 Hooded Oriole, 2-4, n-5, F. H. L. & Co.
 414 Arizona Hooded Oriole, 1-4, No. 59.
 415-416 Orchard Oriole, n-4, No. 57; 1-5, F. H. L. & Co.
 417 Baltimore Oriole, 1-5, No. 33.

- 418 Bullock's Oriole, 1-5, F. H. L. & Co.
 419 Purple Grackle, 1-5, No. 33.
 420 Florida Grackle, 1-4, No. 40.
 421-424 Great-tailed Grackle, 4-4, F. H. L. & Co.
 425-426 Brewer's Blackbird, 1-5, 1-4, F. H. L. & Co.; 1-6, No. 13.
 427-428 American Goldfinch, n-6, No. 45; n-5, F. H. L. & Co.
 429 Arkansas Goldfinch, 1-4, No. 59.
 430 Arizona Goldfinch, 1-6, No. 59.
 431 Lawrence's Goldfinch, n-5, No. 60.
 432-433 House Finch, 1-5, No. 59; 1-5, No. 60.
 434 Pine Si-kin, 1-4, No. 36.
 435 Grasshopper Sparrow, 1-4, F. H. L. & Co.
 436 Thick-billed Sparrow, 1-2; F. H. L. & Co.
 437 Chestnut-collared Longspur, 1-4, No. 30.
 438 McCown's Longspur, 1-4, No. 74.
 439 Vesper Sparrow, n-4, No. 14.
 440 Western Vesper Sparrow, 1-4, No. 60.
 441 Savanna Sparrow, 1-4, No. 59.
 442 Sharp-tailed Sparrow, 1-4, F. H. L. & Co.
 443 Lark Sparrow, 1-5, No. 60.
 444-445 Western Lark Sparrow, 1-5, No. 59; 1-4, F. H. L. & Co.
 446-447 Chipping Sparrow, n-4, 1-3, F. H. L. & Co.
 448-449 Western Chipping Sparrow, 1-3, No. 13; 1-4, F. H. L. & Co.
 450, 664 Gambel's Sparrow, 1-4, No. 1, 1-4, No. 59.
 451 Bell's Sparrow, 1-5, No. 59.
 452-453, 665 Heermann's Song Sparrow, 1-5, No. 59, 2-4, F. H. L. & Co.
 454 Field Sparrow, 1-5, F. H. L. & Co.
 455 Oregon Junco, 1-4, No. 21.
 456 Slate-colored Junco, 1-4, No. 30.
 457 Thurber's Junco, 1-5, No. 55.
 458 Song Sparrow, 1-5, No. 37.
 459-460 Black-throated Sparrow, n-4, 1-5, F. H. L. & Co.
 461-462 Bachman's Sparrow, 2n-4, No. 42.
 463-464 Texas Sparrow, 2-4, F. H. L. & Co.
 465 Samuel's Song Sparrow, 1-4, No. 69.
 466, 666 Rusty Song Sparrow, 1-3, No. 21, 1-4, No. 13.
 467 Swamp Sparrow, 1-5, No. 35.
 468 Indigo Bunting, n-4, No. 14.
 469 Lazuli Bunting, n-4, No. 1.
 470 Painted Bunting, 1-4, No. 59.
 471-472 Towhee, 1-5, No. 8; n-5, No. 3.
 473-474 Spurred Towhee, 1-3, No. 75; 1-3, No. 56.
 475 Oregon Towhee, 1-5, No. 21.
 476-477 California Towhee, 1-3, 1-4, F. H. L. & Co.
 478 Rose-breasted Grosbeak, 1-5 and 1 of 258, No. 16.
 480-481 Black-headed Grosbeak, 2-4, F. H. L. & Co.
 482 Blue Grosbeak, 1-4, No. 48.
 483 Cardinal, 1-4, F. H. L. & Co.
 484 Texan Cardinal, 1-3, F. H. L. & Co.
 485 Gray-tailed Cardinal, 1-4, F. H. L. & Co.
 486 Dickcissel, n-4, No. 31.
 487-488 Lark Bunting, 1-4, No. 12; 1-5, F. H. L. & Co.
 489 Scarlet Tanager, n-4, No. 35.
 490 Summer Tanager, 1-3, F. H. L. & Co.
 491-492 Louisiana Tanager, n-4, No. 29; 1-5, No. 55.
 493 Cedar Waxwing, n-4, F. H. L. & Co.
 494-495 Sharpe's Seed-eater, 2n-3, F. H. L. & Co.
 496 Barn Swallow, 1-5, No. 33.
 497-500 Cliff Swallow, 1-5, No. 53; 3-4, F. H. L. & Co.
 501 Tree Swallow, 1-6, F. H. L. & Co.
 502 Bank Swallow, 1-6, No. 14.
 503 Rough-winged Swallow, 1-7, No. 52.
 504-505 Phainopepla, 1-3, No. 72; 1-4, F. H. L. & Co.
 506 Northern Shrike (?), 1-5, No. 24.
 507 White-rumped Shrike, 1-6, No. 6.
 508 California Shrike, 1-5, No. 27.
 509 Loggerhead Shrike, 1-6, No. 40.
 510-511 Red-eyed Vireo, n-4, No. 33, n-3, F. H. L. & Co.
 512-513 Mountain Solitary Vireo, n-4, No. 19; 1-2, No. 52.
 514-515 Bell's Vireo, n-4, No. 31, 1-4, No. 59.
 516 Hutton's Vireo, 1-5, No. 1.
 517 White-eyed Vireo, 1-4, F. H. L. & Co.
 518 Warbling Vireo, n-4, F. H. L. & Co.
 519 Cassin's Vireo, 1-4, No. 21.
 520-521 Yellow-throated Vireo, 1-2, No. 52; n-3, No. 65.
 522 Prothonotary Warbler, 1-7, F. H. L. & Co.
 523 Swainson's Warbler, n-3, No. 65.
 524 Worm-eating Warbler, 1-5, No. 52.
 525 Blue-winged Warbler, n-5, No. 29.
 526-527 Golden-winged Warbler, 1-3, No. 47; 1-3, No. 24.
 528-529 Magnolia Warbler, 1-4, No. 36, 1-4, No. 24.
 530 Yellow Warbler, n-5, F. H. L. & Co.
 531 Lutescent Warbler, 1-5, No. 2.
 532-533 Nashville Warbler, 1-5, No. 24; 1-4 and 1 of Cowbird, No. 36.
 534-535 Pine Warbler, 1-4, No. 52; n-3, No. 42.
 536 Blackburnian Warbler, 1-4, No. 15.
 537 Black-throated Green Warbler, 1-4, No. 24.

- 538 Prairie Warbler, n-4, No. 42.
 539 Kentucky Warbler, n-5, No. 58.
 540 Hooded Warbler, n-4, No. 15.
 541 Maryland Yellow-throat, n-4, No. 3.
 542 Western Yellow-throat, 1-4, No. 75.
 543 Chestnut-sided Warbler, n-4, No. 37.
 544 Mourning Warbler, n-3, No. 10.
 545-547 American Redstart, n-4, No. 47;
 n-4, No. 77, n-4, F. H. L. & Co.
 548-549 Yellow-breasted Chat, 1-4, No.
 58; 1-4, No. 35.
 550 Long-tailed Chat, 1-4, No. 50.
 551 Oven-bird, 1-5, No. 35.
 552 Louisiana Water-Thrush, n-4, No.
 42.
 553 Catbird, 1-4, F. H. L. & Co.
 554-555 Mockingbird, 1-4, No. 30; 1-6,
 No. 40.
 556 Brown Thrasher, 1-4, F. H. L. & Co.
 557 Sennett's Thrasher, 1-4, F. H. L. &
 Co.
 558-559 Curve-billed Thrasher, 2-4, F.
 H. L. & Co.
 560-563 California Thrasher, 1-3, No.
 71; 1-4, No. 75; 1-5, No. 59, 1-3, F. H. L.
 & Co.
 564 Sprague's Pipit, 1-4, No. 54.
 565-566 Cactus Wren, 1-5, No. 72; 1-6,
 No. 59.
 567-568 Rock Wren, 1-5, No. 51, 1-4, No.
 74.
 569 Carolina Wren, 1-5, No. 42.
 570 House Wren, 1-6, F. H. L. & Co.
 571 Long-billed Marsh Wren, n-9, No.
 59.
 572 Tule Wren, 1-5, No. 75.
 573 Western Winter Wren, 1-5, No. 55.
 574-575 Parkman's Wren, 1-7, No. 1.
 1-7, F. H. L. & Co.
 576 Bewick's Wren, 1-5, F. H. L. & Co.
 577 Florida Wren, 1-5, F. H. L. & Co.
 578 Lomita Wren, 1-4, F. H. L. & Co.
 579-580 Baird's Wren, 2-5, F. H. L. & Co.
 581-582 Brown Creeper, 1-5, No. 30; 1-6,
 No. 52.
 583-585 Tufted Titmouse, 1-7, No. 58;
 1-8, No. 3; 1-6, F. H. L. & Co.
 586 White-breasted Nuthatch, 1-10,
 No. 4.
 587, 667 Pygmy Nuthatch, 1-8, No. 65;
 1-5, F. H. L. & Co.
 588 Red-breasted Nuthatch, 1-7, No. 36
 589 Slender billed Nuthatch, 1-7, No. 73.
 590 Brown-headed Nuthatch, 1-5, No. 40.
 591 Black-crested Titmouse, 1-4, F. H.
 L. & Co.
 592 Plain Titmouse, 1-8, No. 73.
 593 Chickadee, 1-7, No. 17.
 594 Carolina Chickadee, 1-5, No. 52.
 595 Oregon Chickadee, 1-5, No. 21.
 596-598 California Bush-Tit, 1-7, No. 50.
 1-3, No. 60; 1-7, F. H. L. & Co.
 599 Wren-Tit, 1-4, No. 71.
 600 Verdin, 2-4, F. H. L. & Co.
 601-602 Blue-gray Gnatcatcher, n-4,
 1-4, F. H. L. & Co.
 603 Western Gnatcatcher, n-5, No. 72.
 604 Black-tailed Gnatcatcher, n-5, F.
 H. L. & Co.
 605 Golden-crested Kinglet (European)
 n-6, F. H. L. & Co.
 606-607 Wood Thrush, 1-5, No. 31; 1-4,
 No. 52.
 608-609 Russet-backed Thrush, 1-4, No.
 71.
 610-611 Olive-backed Thrush, 1-4, n-4,
 F. H. L. & Co.
 612 Wilson's Thrush, 1-4, F. H. L. & Co.
 613 Hermit Thrush, n-3, F. H. L. & Co.
 614 Red-spotted Bluethroat, 1-6, F. H.
 L. & Co.
 615 American Robin, 1-4, F. H. L. & Co.
 616-617 Western Robin, 1-4, 1-4, F. H.
 L. & Co.
 618 Bluebird, 1-5, No. 49, This was a
 pure white, "albino." set.
 619 Western Bluebird, 1-4, No. 13.
 620 Mountain Bluebird, 1-5, F. H. L. & Co.

FOREIGN EGGS.

- 622 Tree Sparrow, 1-4, F. H. L. & Co.
 623-624 House Sparrow, 1-9, 1-7, F. H.
 L. & Co.
 625 Water Ouzel, 1-5, F. H. L. & Co.
 626 Snowflake, 1-5, F. H. L. & Co.
 627 Wryneck, 1-11, F. H. L. & Co.
 628 Bed Grouse, 1-10, F. H. L. & Co.
 629 European Quail, 1-10, F. H. L. & Co.
 630 Ring Plover, 1-3, F. H. L. & Co.
 631-632 Capercaillie, 1-5, 1-6, F. H. L. &
 Co.
 633 European Partridge, 1-14, F. H.
 L. & Co.
 634 Numidian Crane, 1-1, F. H. L. & Co.
 635 Cinereous Crane, 1-2, F. H. L. & Co.
 636 Arabian Vulture, 1-1, F. H. L. & Co.
 637 Oriental Eagle, 1-2, F. H. L. & Co.
 638 Rough-footed Eagle, 1-2, F. H. L.
 & Co.
 639 Little Imperial Eagle, 1-2, F. H.
 L. & Co.
 640 Griffion Vulture, 1-2, F. H. L. & Co.
 641 Whooping Swan, 1-2, F. H. L. & Co.
 642 Green-crested Tinamou from Bra-
 zil, 1-1, F. H. L. & Co.
 643 Ani, 1-1, F. H. L. & Co.
 644 Meadow Pipit, 1-5, F. H. L. & Co.
 645 Redpoll, 1-5, F. H. L. & Co.
 646 Ostrich, Africa, F. H. L. & Co.
 647 Emu, from Australia, F. H. L. & Co.
 648 Rhea, South America, F. H. L. & Co.
 649 Moa (Cast). An extinct New Zea-
 land species.
 650 *Aepyornis* (Cast) An extinct Mada-
 gascar species.

CIRCULAR DISTRIBUTERS WANTED

Publishers, Patentees, Manufacturers, etc., are daily requesting us to supply the addresses of reliable circular distributors, bill posters, etc. Brunn's success is marvelous, and will open up in 200,000 AGENTS HERALDS next issue, to be mailed to business men, new, profitable, and permanent employment to one man, woman or youth in every town and hamlet in the U. S. and Canada. "The early bird catches the worm." We want a few such ads. as Brunn's (sample below) to start with in this month's MAMMOTH edition of AGENTS HERALD.

BRUNN Nails up signs, distributes circulars, papers, samples etc. throughout Blackhawk and surrounding counties only \$3.00 per 1000. Address, W. H. BRUNN Waterloo, Ia.

Brunn paid \$2.40 to insert above 4 lines, June '90. He began during the summer. That ad. paid then; *is paying yet*. He has been kept constantly busy, employs three men to assist him, clearing on *their labor* from \$10 to \$15 a day distributing circulars at \$3.00 per 1000 for many firms who saw his ad. in THE HERALD. It costs every firm at least \$10 in postage alone to mail 1000 circulars. A saving to each firm who employ you of \$7 per 1000. Ten firms may each send you 1000 at the same time, making 1000 packages of 10 each, for distributing which you would promptly receive \$30. 15 in advance and \$15 when work is done. Parents make your boy a present. Start them in this growing business. Begin this neat business before some one in your county gets the start of you. "Come in on the ground floor." Instructions How to Conduct the Business, Free to each distributor ONLY, who sends us \$2.40 cash or postage stamps for a 4 line "ad."

AGENT'S HERALD,
No. 171 South 8th Street, Philada., Pa.

Our Address

during the next few months, will be at either

ALBION, N. Y., or

No. 3571 Cottage Grove Ave.,
CHICAGO, ILLS.

You can address your orders and letters to whichever address you are the nearer—All matters pertaining to the OöLOGIST, however, should be addressed at Albion. Should you wish to reach us personally, you should address "LATTIN" at ALBION, and "WEBB", at CHICAGO.

Faithfully,

F. H. LATTIN & CO.

TRAYS. If you want any of those extra heavy alligator covered square trays, such as we had in our exhibit at the World's Fair (which you and other collectors thought the "slickest" tray for the purpose ever made) we can spare a few thousand—any size from 3 in.x3 in. to 8 in.x 8 in. We will ship by express at your expense in well assorted nests at \$1.00 per 100, or \$10.00 per 1000. Or, if you order special sizes and do not leave the assortment to us, they will cost you \$1.50 per 100 or \$15.00 per 1000.

Not less than 100 lots sold, and at our prices, are less than cost.

We can furnish 3 in.x3 in., 4 in.x1 in., 5 in.x5 in., 6 in.x6 in., 7 in.x7 in., and 8 in.x8 in.

Order *Quick* if you want any of the World's Fair Trays. F. H. LATTIN & CO. 3571 Cottage Grove Ave., CHICAGO, ILLS.

THE GREAT DIVIDE



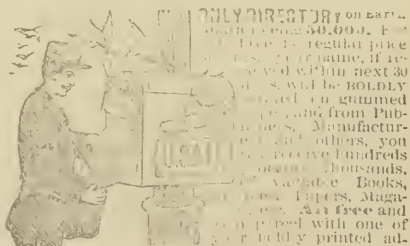
The specific and universal opinions, condensed, are as follows:

"You deserve great praise, and the gratitude of the reading world—that portion of it, at least, that is fortunate enough to read THE GREAT DIVIDE. Having a field entirely its own, it is intensely American in cast and character."

It is useless for us to say, the illustrative features and typography are superb—equal in quality and unusualness to the fascinating and strange contents that fill our columns.

TEN CENTS a copy; ONE DOLLAR a year. Your newsdealer has it, if not, send to

THE GREAT DIVIDE, Denver, Col.



ONLY DIRECTORY on Earth!—
Published for \$3.00, per copy.
The regular price is \$5.00, per copy, if received within next 30 days will be boldly printed on gummed paper, and from Publishers, Manufacturers, and others, you will receive hundreds of thousands of valuable Books, Papers, Magazines, and free and bold printed addresses pasted thereon. **ENTER 2221** We will also print and pay for you, all of your gummed addresses for you, for our paper and ink, which are valuable to be kept in your address books, etc., to prevent their being lost. **REDSVILLE, N. C., Dec. 6, 1891.** DEAR SIR: My addresses received. From my 25 cent address in your Lightning Directory I have received over 700 parcels of mail. My addresses you scattered among publishers, manufacturers, etc. are arriving daily, on valuable parcels of mail, from all parts of the World. **J. A. WALKER.**

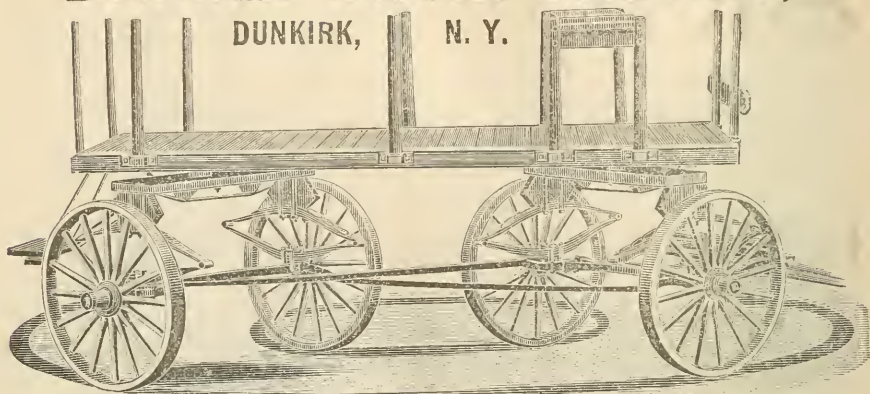
THE LIGHTNING DIRECTORY

Department No. 171, Philadelphia, Pa.

The Words' Fair at Home!

Selected Photographs, printed and mounted by a Professional Photographer, from 4x5 Negatives, on Bevel Edge Gold Line Mounts 5x6 inches.

Address **P. F. MARCH**, Fern Bank, Hamilton County, O.

DUNKIRK WAGON COMPANY,**DUNKIRK, N. Y.**

Patented May 6, 1890.

MANUFACTURERS OF
Grape, Peach, Orange, Banana, Pine Apple, Road Wagons & Light Drays.

AGENTS WANTED.**SEND FOR CIRCULARS.**

Also the most durable Childs' Express Wagon on the Market.

Niagara Falls.

Hundreds of the Readers of the OOLOGIST will visit them during the World's Fair year and they should make it a point to visit

TUGBY'S NEW MUSEUM.

This new museum is located on Falls street, only a few steps from R. R. Depots—Electric car line passes by its entrance—and occupies a new three story building, which cost thousands of dollars to build and fill—Among the hundreds of attractions within will be found a large and magnificent collection of Birds and the **LARGEST COLLECTION OF BIRDS EGGS** in a Public Museum in the State.

BIRDS EGGS
CURIOS.
SHELLS
NATURALISTS' SUPPLIES
AND BOOKS
 2¢ STAMP FOR
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CHAS. K. REED.
 262 Main St. WORCESTER, MASS.

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We secure United State and Foreign Patents, register Trade-Marks, Copyrights and Labels, and attend to all patent business for moderate fees. We report on patentability free of charge. For information and free hand-book write to
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MARLIN SAFETY

Made in all styles and sizes. Lightest, strongest, easiest working, safest, simplest, most accurate, most compact, and most modern. For sale by all dealers in arms. Catalogues mailed free by

The Marlin Fire Arms Co.,
 NEW HAVEN, CONN., U. S. A.

REPEATING RIFLES

 A detailed illustration of a Marlin repeating rifle, shown from a side profile. It has a long barrel and a distinctive pump-action mechanism.

\$10,000 IS A LARGE SUM
TO HAVE

“TIED UP”

**In Shells, Curios, Specimens,
and Souvenir Goods**

during these close times—especially so if one needs the money and this stock is a surplus one.

The above hits our case exactly and we have *more* than this amount “tied up” in surplus stock at our Chicago Store. The World’s Fair is no more. We do not need the goods in Chicago, neither do we need them back East, and furthermore do not care to go to the expense of shipping them there.

If you wish to invest (or know of anyone who does,) say \$5, \$10, \$25, \$50, \$100, \$500, \$1,000 or more, in Specimens, Curios, Supplies, or anything we have left in Chicago, either for your own collection, your school or college cabinet, a stock for the Holidays (upon which we can guarantee you to double your money,) or upon a full and complete Dealer’s stock, we now offer you an opportunity to make such purchases at prices never before thought of. In fact on nice large orders we would be tempted to sell at nearly

50 per cent. Less

Than Ordinary Wholesale Prices.

Let us know your wants *at once*, and we will quote you prices upon which you cannot help but make a profit of from 100 to 500 per cent., or if for a cabinet, we can save you many dollars.

Address us at either Albion, N. Y., or No. 3,571 Cottage Grove Ave., Chicago, or if within 100 miles of either place, call. It will pay you.

Faithfully,

F. H. LATTIN & CO.

THE **World's Fair Book** NOW GREATEST READY.

We take pleasure in announcing that we have made arrangements with the publishers of

THE MAGIC CITY

To supply this celebrated work in Weekly Parts to the subscribers of the OöLOGIST at the very low price of ten cents per number. It will be issued in sixteen consecutive Weekly Parts, each containing sixteen to twenty magnificent Photographic Views and Historical Descriptions of the **WORLD'S FAIR** and the **MIDWAY PLAISANCE**, by the famous American author, **Mr. J. W. Buel**. The Photographs are the finest that have ever been offered to the public. They constitute a splendid series of

Over 300 Views

In **Natural Photograph Colors**, embracing all the wonderful features of the World's Fair and its surroundings, and the famous **Midway Plaisance**, with its curious and interesting character sketches of life in foreign countries and among wild and curious races of people.

More than \$50,000 have been expended in the preparation of this truly magnificent work, and \$50,000 more will be expended during the next few weeks in completing it. The author and his staff of artists spent nearly the whole summer at the Fair, collecting historical materials and securing the grandest array of Photographs of the buildings, grounds, exhibits, landscapes, and curious and wonderful features of the greatest Exposition that human eye ever beheld.

These photographs were taken by real artists—artists of reputation, skilled in their profession, who knew how to select points of the greatest interest and from which the best views could be obtained.

In addition to the photographs secured by these special artists, the publishers also had the pick and choice of those taken by the Official Photographer of the United States Government.

THE MAGIC CITY alone gives the only great Historical representation of the World's Fair and Midway Plaisance, illustrated with **Over 300 Superb Photographs**, comprising an immense and wonderfully beautiful oblong volume, 11x14 inches in size.

ONE COUPON AND TEN CENTS GETS IT!

THE MAGIC CITY is published in 16 consecutive weekly parts or portfolios, each portfolio containing 16 to 20 of these splendid original Photographs and Historical descriptions. The photographs could not be purchased separately for less than \$1.00 to \$1.50 each. Dealers charge these prices regularly for greatly inferior views of this size. Portfolios Nos. 1 and 2 are now ready. Cut out the coupons on this page and mail them to the office of the OöLOGIST, with **TEN CENTS** each in stamps or silver, and you will get either or both as you may order. We charge no postage on parts sent by mail.

COUPON FOR PORTFOLIO NO. 1,

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OF THE

World's Fair and Midway Plaisance,
entitled: **The Magic City.**

Cut out this Coupon and mail to the Oölogist with ten cents in stamps or silver, and receive Portfolio No. 1

COUPON FOR PORTFOLIO NO. 2,

The OöLOGIST's Historical Art Series

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Entitled: **The Magic City.**

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THE OÖLOGIST.

Monthly. 50c. per Year.

VOL. XI. NO. 2.

ALBION, N. Y., FEB., 1894.

WHOLE No. 100

Wants, Exchanges, and For Sales.

Brief special announcements. "Wants," "Exchanges" "For Sales," inserted in this department for 50c per 35 words. Notices over 35 words, charged at the rate of one cent per each additional word. No notice inserted for less than 50c. Terms, cash with order.

Strictly First-class specimens will be accepted in payment at one-half list rates.

"DEALERS" can use these columns at *Regular Advertising rates, only*.

Exchange Cards and Coupons (subscription) will be accepted for "Wants" and "Exchanges" *only* and according to conditions stated thereon.

NOW is an opportune time for **YOU** to renew your subscription to the **OÖLOGIST** for 1894, and it is in arrears to make an early settlement of the same. Whether this reminder applies to you or not, is it not high time that **YOU** sent us at least one new subscriber

I WILL exchange specimens, natural history papers novels, Columbian stamps, etc., for birds eggs in sets and oological supplies. **ROY HATHAWAY**, Red Key, Ind.

FOR SALE.—\$15.00 fine collection of first-class sets and series with full data for \$25 00. Also watch, 20 bore B. L. shot gun and telescope. A few specimens gold ore, ten cents each. **B. S. BOWDISH**, Phelps, N. Y.

WANTED.—Good skins of Black Skimmer, Florida Cormorant and Carolina Paroquet. Have a choice list of skins and sets and would pay part cash. Write at once to **N. HOLLISTER**, Box 681, Delavan, Wisconsin.

CORRESPONDENCE is solicited from those desiring to purchase fine, small-holed Oregon birds' eggs, in sets with complete data, the coming season. Price list for a 2 cent stamp. **ARTHUR L. POPE**, McMinnville, Ore.

TO EXCHANGE.—U. S. postage stamps and stamped envelopes for same, or revenue, or Confederate stamps or will pay cash for ones wanted. **WALTER J. GARVEN**, Greensboro, Vermont.

FOR EXCHANGE.—A good "Juno" Safety Bicycle, 28in. wheels, ball bearing, either lady or gent can ride. Make best offer in eggs, stamps or books. **W. F. WEBB**, 3571 Cottage Grove Ave., Chicago, Ill.

LOOK!—A collection of 1st class singles at 15 per cent discount on Standard Catalogue to exchange for 1st class eggs in sets with data, of water birds, Hawks and Owls. Send list and receive mine. A few sets to exchange. **R. SANDFORD** care of A. Kirkham, Hastings-on-the-Hudson, New York.

WANTED.—A good Kodak, any of the best makes, size No. 2. Will offer fifty dollars worth of western eggs in sets including White Faced Ibis, Black Stilt, Least Vireo and others, also want stamps in exchange. **A. M. SHIELDS**, Stimson Block, Los Angeles, Cal.

FOR EXCHANGE.—A collection of about fifteen hundred foreign and U. S. stamps, valued at \$5.00, for eggs. **JNO. BECKWITH**, Franklin, Tennessee.

EGGS IN SETS and singles and all kinds of curios to exchange at any time. **O. W. HOWARD**, 833 S. Olive St., Los Angeles, Cal.

STUDENT CAMERA, boy's bicycle and bird wings sold cheap, foreign stamps on sheets, 12 for 6 cents. **FRANK BREHM, JR.**, Box C, Erie, Pa.

TO EXCHANGE, as a lot, for best offer in 1st class sets, the following 2d class singles: Ridg. No. 5 set 1/4, 47, 23, 93, 123 1/4, 182, 240b, 249, 272, 282, 326, 378, 394, 402, 408, 436, 522, also 1st class sets of 402 and others to exchange for sets. **A. H. PHILLIPS**, Princeton, N. J.

ALLIGATOR SKINS.—We have a number of first-class Alligator skins, made last November by an experienced hand. Prices *prepaid* only: For a 2 1/2 Gator, \$2.00; 3 ft. one, \$2.50; 3 1/2 ft., \$3.00. Address **F. H. LATTIN & CO.**, 3571 Cottage Grove Ave., Chicago, Ill.

TO EXCHANGE.—"Our Birds in Their Haunts" (new.) sets with data of Nos. 30a2-1, 289 1-3, 378 1-10, 506 1-5, 593 1-3, 598 1-3, 705 1-4 and many singles. Also two thoroughbred female Scotch Collie puppies and other articles, to exchange for eggs in sets or books on ornithology. **WM. H. BELL**, West Point, Virginia.

On the wrapper of this month's OÖLOGIST you will find some figures following your name. These figures you will find fully explained on page 56 of this OÖLOGIST.

FOR SALE.—3 new 1894 Scott's International Stamp Albums at \$1.50 each. This edition has been greatly enlarged. F. H. LATTIN & CO., 3571 Cottage Grove Ave., Chicago, Ill.

OFFERED.—Skins of Mammals, birds eggs, from Washington, Idaho. Wanted, microscope, camera, aneroid barometer, Compass, Heavy Revolver Cones' Key, Ridgeway's Manual. J. O. SNYDER, Pullman, Wash.

A NEW GOLDING \$25 printing press, rollers never used, for best offer in eggs, rocks, Indian relics or curios. Make offer at once J. W. MYKRANTZ, Ashland, O.

WANTED:—To hear from all who would like to exchange eggs with me this season. I can collect anything you want in southern eggs. GEO. F. MIMS, Lock Box 85, Edgefield, S. C.

NOTICE. I wish to close out my entire collection of minerals, shells and fossils, so, until April 1st I will send \$2.50 worth to every one sending me \$1.00. Will exchange any one of the above and books for Indian relics. GEO. W. DIXON, Watertown, S. D.

MINERALS and first class eggs with datas to exchange for same or egg tools. GEO. ROBBINS, Front and A Sts., San Diego, Cal.

FOR SALE OR EXCHANGE—I have first Judge's prize offered by OÖLOGIST (part of Maynard's works.) Value \$5.00. Will sell for \$3.50 or best offer. FRED W. PARKHURST, Bath, Steuben Co., N. Y.

"The OÖLOGIST gives the quickest returns of any medium I ever saw. Answers to my notice came by next mail after receiving my copy." ERNEST H. SHORT, Chili, N. Y.

A BOOK of 100 datas with stub perforated sent postpaid for 30 cents. I will exchange a limited number for sets of Hawks, Hummers and Water birds at 60 cents per 100. Sample on application. ROY CRIFFIELD, Atlanta, Illinois.

A GREAT ISSUE!—The January *Nidologist* surpasses any of the ones which have preceded it, which is saying much. Walter Raine contributes the first installment of a wonderfully fascinating article on "Bird-Nesting in North West Canada," with two "half-tone" illustrations, one of a Pintail Duck's nest and the other a portrait of Mr. Raine. A "half-tone" portrait of the late oölogist, Capt. B. F. Goss, with article by Capt. Chas. E. Bentire, and an illustrated article by C. E. Doe on the Ospreys, are other features. Every issue of this, the only illustrated, ornithological monthly in America, is *exceptional*. You never saw its like. Single copies are 15 cts. each, but we send you a "sample" for 10 cents silver. Better send a dollar for a year's subscription and get free exchange notice which will otherwise now cost you 50 cents. Back numbers supplied while they last. Address, H. R. TAYLOR, or NIDIOLOGIST, Alameda, California.

EXCHANGE:—I have a Winchester single shot, 25 cal. rifle, has been used but little, a set of Ideal reloading tools with it. A 38 cal. collecting gun, hunting coat, a few bird skins and the following books: Therapeutics, Its Principles and Practice, by H. C. Wood, this book is perfectly new; Home Studies in Pharmacy; Modern Magic. I will exchange for surveying instruments, old war relics or for books pertaining to Civil Engineering. W. R. BIRD, Mason City, Iowa.

I HAVE to exchange desirable sets with original data and singles, for first-class bird skins. EDMUND HELLER, 195 Rubidoux Ave., Riverside, Cal.

FOR EXCHANGE.—A pair of large Elk Antlers on Skull in good shape, for Kodak Camera in good order and standard make, also eggs to exchange for minerals, shells and curios of all kinds. ALF. EASTGATE, Grand Forks, N. D.

WANTED.—First-class eggs in sets for which I will exchange minerals, fossils, curiosities, books and several specimens that were on exhibition at the Columbian Exposition. JAMES J. CARROLL, Lampasas, Texas.

EXCHANGE NOTICE.—Have seven vols. of OÖLOGIST, one of Science Taxidermists Manual, Brown; Taxidermists' Guide, Hurst. Want Am Agriculturists, Abbott's "Stone Age" and second hand steel traps No's 0, 1 and 2. ALBERT B. FARNHAM, Benning, D. C.

TO EXCHANGE.—Birds in the meat this winter. Parties who are interested please write. No cards. H. M. WOLF, Kewanee, Henry Co., Ills.

I HAVE eggs of the Caspian Tern and American Herring Gull to exchange for Eggs, Skins, Curios, etc. ED VAN WINKLE, Van's Harbor, Mich.

LOOK HERE! I have a rare and beautiful Fossil (Birds Eye Marble), found nowhere else. I will exchange Highly Polished specimens or Paper Weights for Indian Relics, Rare Fossils or Shells. CHARLES BRIGGS, Lisbon, Ia.

IOWA COLLECTORS.—I desire to correspond with every Ornithologist in the state, with a view of extending our observations, send address on postal to, DAVID L. SAVAGE, Salem, Henry Co., Iowa.

EGGS—Bald Eagle, Buzzard, Hawks, Hooded and Parula Warbler and nests. Many others, cheap, cash. Only perfectly safe climbing gear, adjustable to any size tree, can make cheap, can stop anywhere on tree to rest and have your hands free. Also new style climbers, not the least tiresome. Stuffed birds. Information, terms, prices for stamp. F. THEO MILLER, Lancaster, C. H. Va.

I RECEIVED 10 times as many answers to that one little exchange in June OÖLOGIST than I did in all of several other exchange ads. I ventured in other papers, which cost me over \$10. ED. VAN WINKLE, Van's Harbor, Michigan.

FOR SALE:—Some fine sets of American Bittern's eggs of 4 and 5 eggs each, first class, with data, at 30 cents per gg. Also large lists of sets and singles in proportion, and a 38 cal. collecting gun, nickel plated, 5 spot, with detachable black walnut stock, in good condition. ELMER J. GILLETT, Barre Centre, Orleans Co., N. Y.

COLLECTORS:—I have practically a perfect contrivance for climbing trees which I have successfully tried for several years. By its use the most difficult tree, regardless of shape, size or height, is rendered absolutely safe and easy to climb. The device is durable, light and easy to manipulate. Price \$2.00. For particulars address, M. C. WHITE, Matthews, Va.

ONE COPY "Birds of Michigan," 70 Natural History papers, single birds eggs and pair of polished cow horns for good Indian Relics. SAMUEL H. ROBBE, Bellville, Mich.

GOING TO BUILD?

Send for illustrated catalogue, containing 26 handsome designs. FREE. Address **SHOPPEL'S MODERN HOUSES**, 63 Broadway, N. Y. J6t

EGGS.

From the *Orient and Assam* (Malakka) India, Australia, Africa, etc., correctly named at moderate prices, also European and exotic Birds skins. **HERMANN ROLLE**, Emdener St., 4, Berlin, N. W., Germany



SEA SHELLS, Coral, Minerals, Birds' Eggs, and Skins, Fossils, Naturalists' Supplies, Taxidermy. Catalogue, 2c. **C. F. CARR**, New London, Wis.

PRINTING Of all kinds for Naturalists a speciality. Note and letter heads, envelopes, circulars, illustrated catalogues for natural history dealers. Have hundreds of engravings of natural history specimens. Write for estimates, 100 envelopes printed, 45c, noteheads same price, postpaid. **C. F. CARR**, Job Printer, New London, Wis. Jt

TAXIDERMISTS! I have just imported over 500 gro. of artificial leaves. I am now having a plate made and a list printed. If you think this list would interest you, I would be happy to mail you one. I'm now stocking up with the best material in the market and no doubt within a month I will have the finest stock of supplies in the country. If you are a live taxidermist, send me your address on a postal. **JAMES P. BABBITT**, Taunton, Mass.



THE LATEST
Dating Stamp.

1894 to 1899.

50c.

POST PAID.

Satisfaction Guaranteed

R. W. FORD,

Rubber Stamp Mfr.

BRISTOL, CONN.

PATENTS

Promptly secured. Trade-Marks, Copyrights and Labels registered. Twenty-five years experience. We report whether patent can be secured or not, free of charge. Our fee not due until patent is allowed. **32 page Book Free.** **H. B. WILLSON & CO.,** Attorneys at Law, Opp. U. S. Pat. Office, **WASHINGTON, D. C.**

CIRCULAR DISTRIBUTUTERS WANTED

Publishers, Patentees, Manufacturers, etc., are daily requesting us to supply the addresses of reliable circular distributors, bill posters, etc. Brunn's success is marvelous, and will open up in 200,000 AGENTS HERALDS next issue, to be mailed to business men, new, profitable and permanent employment to one man, woman or youth in every town and hamlet in the U. S. and Canada. "The early bird catches the worm." We want a few such ads. as Brunn's (sample below) to start with in this month's MAMMOTH edition of AGENTS HERALD.

BRUNN Nails up signs, distributes circulars, papers, samples etc., throughout Blackhawk and surrounding counties only \$3.00 per 1000. Address, **W. H. BRUNN** Water Co. Ia.

Brunn paid \$2.40 to insert above 4 lines, June '90. He began during the summer. That ad, paid then; *is paying yet*. He has been kept constantly busy, employs three men to assist him, clearing on *their labor* from \$10 to \$15 a day distributing circulars at \$3.00 per 1000 for many firms who saw his ad. in *THE HERALD*. It costs every firm at least \$10 in postage alone to mail 1000 circulars. A saving to each firm who employ you of \$7 per 1000. Ten firms may each send you 1000 at the same time, making 1000 packages of 10 each, for distributing which you would promptly receive \$30, 15 in advance and \$15 when work is done. Parents make your boy a present. Start them in this growing business. Begin this new business before some one in your county gets the start of you. "Come in on the ground floor." Instructions How to Conduct the Business. Free to each distributor only, who sends us \$2.40 cash or postage stamps for a 4 line "ad."

AGENT'S HERALD,
No. 171 South 4th Street, Philada., Pa.

Our Address

during the next few months, will be at either

ALBION, N. Y., or
No. 3571 Cottage Grove Ave.,
CHICAGO, ILLS.

You can address your orders and letters to whichever address you are the nearer—All matters pertaining to the OÖLOGIST, however, should be addressed at Albion. Should you wish to reach us personally, you should address "LATTIN," at ALBION, and "WEBB", at CHICAGO.

Faithfully,

F. L. LATTIN & CO.

TRAYS. If you want any of those extra heavy alligator covered square trays, such as we had in our exhibit at the World's Fair (which you and other collectors thought the " slickest " tray for the purpose ever made) we can spare a few thousand—any size from 3 in.x3 in. to 8 in.x8 in. We will ship by express at our expense in well assorted nests at \$1.00 per 100, or \$10.00 per 1000. Or, if you order special sizes and do not leave the assortment to us, they will cost you \$1.50 per 100 or \$15.00 per 1000.

Not less than 100 lots sold, and at our prices, are less than cost.

We can furnish 3 in.x3 in., 4 in.x4 in., 5 in.x5 in., 6 in.x6 in., 7 in.x7 in., and 8 in.x8 in.

Order *Quick*! If you want any of the World's Fair Trays. **F. L. LATTIN, & CO.,** 3571 Cottage Grove Ave., CHICAGO, ILLS.

The Worlds' Fair at Home!

Selected Photographs printed and mounted by a Professional Photographer, from 4x5 Negatives, on Bevel Edge Gold Line Mounts 5x6 inches.

Address **P. F. MARCH**, Fern Bank, Hamilton County, O.

SEND 8 2-CENT STAMPS TO THE
CO., 38a, UPCERNERD, CHELSEA, LONDON
For a copy of British Birds, a handbook giving a clear and concise description of the Nests and Eggs, Distribution, Migration, &c, of all British Birds. We will also send you our catalogue and specimen copies of our other publications. The Collectors' Monthly, a splendid journal for all who wish to learn about British Ornithology and Oology. Specimen copy sent. Subscription to U. S. A. and Canada, only 40 cents per year.

A Few Important Items.

"BARGAINS THAT ARE BARGAINS."
We expected to have a new page of them this month but space forbids. On this account we extend the time of the ones offered in January OÖLOGIST to March 1st, not a single day later.

OÖLOGISTS WANTED. On page 61 of this issue we quote our prices on back numbers of the OÖLOGIST. We can use any of the 20c. numbers at 15c. each, any of the 15c. ones at 10c. and any of the 10c. ones at 5c. each, payable in anything we offer for sale or will send credited check, good for the amount. Will also allow 15c. each for Lattin's '85 "OÖLOGIST HAND-BOOK."

PRIZES for best articles and to the Judges, will be awarded much more liberally than in '93. Particulars next month sure.

YOU ARE A JUDGE. Which are the five best articles in this month's OÖLOGIST? Send in your vote on a postal not later than Feb. 20th.

Faithfully,
F. H. LATTIN & CO.



CAN I OBTAIN A PATENT? For a prompt answer and an honest opinion, write to **MUNN & CO.**, who have had nearly fifty years' experience in the patent business. Communications strictly confidential. A Handbook of Information concerning Patents and how to obtain them sent free. Also a catalogue of mechanical and scientific books sent free.

Patents taken through Munn & Co. receive special notice in the *Scientific American*, and thus are brought widely before the public without cost to the inventor. This splendid paper, issued weekly, elegantly illustrated, has by far the largest circulation of any scientific work in the world. \$3 a year. Sample copies sent free.

Building Edition, monthly, \$2.50 a year. Single copies, 25 cents. Every number contains beautiful plates, in colors, and photographs of new houses, with plans, enabling builders to show the latest designs and secure contracts. Address **MUNN & CO., NEW YORK, 361 BROADWAY.**

YOU CAN MAKE \$4 PER DAY

Handling the **FASTEST SELLING** article on record **OVER A MILLION SOLD IN PHILADELPHIA!**

No matter where you reside; every body wants them. Write to-day, enclosing 2c. stamp and we will mail you 4 Free Samples and full particulars, which will enable you to commence work at once. Circulars free. **SMITH MFG CO., No. 171 Pepper Bldg., Phila., Pa.**

The World's Fair Eggs.

We have left about one-half the eggs that we exhibited—mentioned in last OÖLOGIST as exhibited by "F. H. L. & Co."—at the World's Fair. In most cases these were the only eggs of the species ever within the bounds of Jackson Park and consequently the only ones at the World's Fair.

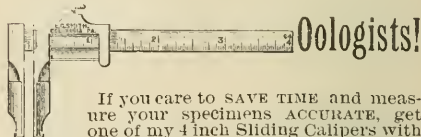
If you can use any of these eggs at not less and perhaps at a slight advance over regular rates, we would be pleased to have your list of wants at earliest possible date and we will quote you lowest cash price for the ones we have left. With each set we will give a written guarantee that it was the identical one we exhibited at the World's Fair.

Address all letters referring to the "Exhibit" eggs to **ALBION, N. Y.**

F. H. LATTIN & CO.

Sliding Calipers! All Sizes & Graduations.

Vernier and Metric or French System.



If you care to **SAVE TIME** and measure your specimens **ACCURATE**, get one of my 4 inch Sliding Calipers with hardened jaws 1 1/4 in. long, graduated in 1-100 of an inch. Sent registered to any part of the U. S. for \$2.50. 6 inch scales graduated in 1 100ths and mm.—75 cts.

Send for one to

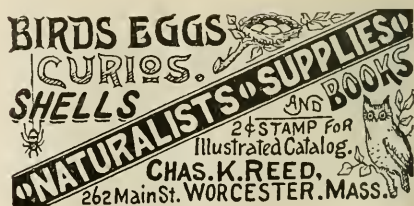
E. G. SMITH, Columbia, Pa.

Reference, the editors of this paper.

The above tools are first-class in every respect and **WARRANTED ACCURATE** (Liberal inducements to agents.)

H. H. & C. S. BRIMLEY, COLLECTORS, RALEIGH, N. C.

First-class Bird and Mammal Skins and Eggs, Reptiles and Batrachians both alive and in alcohol. Full data. Send stamp for price lists.



20,000 MARCH OÖLOGISTS

WILL BE PRINTED ON MARCH 1st.

During 1893 the greatest number printed at any one issue was 3,000 copies and the smallest 2,500. The actual average for '93 was 2,750 copies per month.

Way back in the good old days of the **Young Oölogist** we frequently had 5,000 copies printed per month and once we had 6,000. This number we believe was the greatest ever issued. Of course when printing these large editions the bulk of them were used as "samples."

These samples, however, cost money, required time and labor to mail advantageously and as we grew older in both years and experience we discontinued the sample business and for the past four or five years have issued only a sufficient number to "go around," which has ranged from 2,000 to 3,000 copies per month.

As the present number of subscribers *exceeds* 2,000 it is safe to say that the smallest number that will be printed during 1894 will be that of the January issue, of which we printed 2,500 copies.

This month's (February) **Oölogist** completes the first hundred numbers of its existence and in order to fittingly celebrate this almost unprecedented happening or occurrence—That a publication devoted to Birds their Nests and Eggs or in fact any of the various branches of Natural Science, should not only so long survive the trials and vicissitudes of naturalistic journalism but that too with its original Editor and Publisher still at the helm—we shall begin the second century with an edition of 20,000 copies.

"What will we do with them?" Well, read on.

WE HAVE 7845 PATRONS.

First. We have recorded in our books since Jan. 1, 1893 the names of **7845** collectors who have *written us*. About one-third of the number are or have been subscribers of the **Oölogist** at some time during that period; one-half of the remainder or one-third of the whole are not subscribers of the **Oölogist** but have during the past two years purchased goods of us at various times in amounts ranging from **5 cents to over \$1000.**

To the value of the remainder of these 7845 addresses we cannot attest but all of them were, however, sufficiently interested in our business to at least "swipe" one of their firms postals and request us to send them a "cattleongue and sample of the **Oölegouse**" and as much more as they might hope we would send them gratuitously.

These 7845 names are distributed as follows:

Alabama.....	44	Massachusetts.....	312	South Dakota.....	36
Arizona.....	12	Michigan.....	350	Tennessee.....	173
Arkansas.....	41	Minnesota.....	183	Texas.....	212
California.....	342	Mississippi.....	99	Utah.....	18
Colorado.....	55	Missouri.....	155	Vermont.....	123
Connecticut.....	234	Montana.....	23	Virginia.....	124
Delaware.....	32	Nebraska.....	133	Washington.....	32
District of Columbia.....	49	Nevada.....	14	West Virginia.....	40
Florida.....	91	New Hampshire.....	82	Wisconsin.....	210
Georgia.....	146	New Jersey.....	180	Wyoming.....	11
Idaho.....	9	New Mexico.....	11	DOMINION OF CANADA.	
Illinois.....	581	New York.....	1008	British Columbia.....	4
Indiana.....	224	North Carolina.....	139	Alberta.....	2
Indian Territory.....	1	North Dakota.....	33	Manitoba.....	6
Iowa.....	354	Ohio.....	441	New Brunswick.....	2
Kansas.....	211	Oklahoma.....	1	Nova Scotia.....	7
Kentucky.....	71	Oregon.....	55	Ontario.....	164
Louisiana.....	38	Pennsylvania.....	482	Quebec.....	25
Maine.....	196	Rhode Island.....	33	Foreign.....	18
Maryland.....	109	South Carolina.....	60		

OUR WORLD'S FAIR EXHIBIT AND REGISTER.

Second. At the World's Columbian Exposition our exhibit occupied over 2,000 square feet and within this space we had the largest and best displays on the Grounds in the following departments, viz:

1. Taxidermy—Our Wall Pieces, "From an *"artistic or taxidermic"* standpoint.

2. Nest and Eggs of North American Birds.

3. Foreign Birds Eggs.

4. Taxidermists Instruments and Supplies.

5. Oölogists Instruments and Supplies.

6. Entomologists Instruments and Supplies.

7. Botanists Instruments and Supplies.

8. Miscellaneous Scientific Instruments.

9. Scientifically prepared Bird Skins.

10. Original Plates from Audubon's "Birds of America."

11. Collection of Books and Publications devoted to Natural History.

12. Shells—From a showy or commercial standpoint.

13. Of Scientific Shells we exhibited only the single family—*Helicidae*. Of this family we exhibited specimens of over 800 species which was by far the best display of the family at the Exposition. We could have made a display of over 10,000 species of Scientific shells—eclipsing that of any Government or establishment—but our space and time would not permit.

In the centre of our space we erected a snug little office, this, we used as a background and surrounded with exhibits.

At the right of the entrance to our office we had a desk, upon which we placed our business cards, pen and ink, and last but not least our "World's Fair Register." Each page of this Register was divided into three columns at the top of which were respectively printed in bold black letters the following, "Name," "Address in Full," "Interested in." Over this desk and Register we placed a sign or card of which the following is an exact, but greatly reduced, reproduction.

Please Register
naming the department
of Natural science you
are mostly interested in,
we wish to send you our
CATALOGUE.

As to the number of names we secured in this Register—Our Mr. Webb—who as yet remains in Chicago and with whom the safe keeping of our Register is still intrusted—writes, "Relative to the World's Fair Register we secured about 10,000 names of which from 7,500 to 8,000 would pay us to circularize."

THE SCIENTISTS INTERNATIONAL DIRECTORY.

Third. The last edition of the "Scientists' International Directory" contains the names and addresses of *over 6,000* Professional and Amateur American Naturalists and Scientists, and *over 1,000 Live* Foreign ones, located in every quarter of the Globe.

Summary. From these three sources:

1. Our own Correspondents.
2. Our World's Fair Register.
3. Scientists International Directory.

We shall secure *at least 18,000 all different* addresses and possibly a full 20,000—to each of these we propose to send a sample copy of our No. 101, March, 1894, **Oölogist**.

Every copy will go to an address whom we believe will be interested in the **Oölogist** and the business of **F. H. L. & Co.**

If we have convinced you that our last statement is a fact—Why will it not pay **you** to have **your** Want, Exchange or For Sale Notice or even a full page advertisement in these 20,000 March **Oölogists**?

OUR ADVERTISING RATES.

Rates will not be advanced but will remain the same as an ordinary 2,500 edition which are as follows: Want, Exchange and For Sale Notices 50 cts. per 35 words, 1c. per each additional one, each figure used in these notices will be counted as a word or the same as when used in a telegraph message. Dealers can use the Want, Exchange and For Sale Columns at regular advertising rates only, viz: 20c. per line, counting seven words to the line.

RATES FOR ADVERTISEMENTS.

20 cents per Nonpareil Line. 168 lines in every page.

No advertisement of less than 3 lines will be accepted for March issue.

All orders for advertisements amounting to \$2.00 (10 lines) or less must be accompanied by cash.

RECAPITULATED RATES for the 20,000 edition for March, 1894 from which there is positively no deviation.

1 page (168 lines)	\$16.80
$\frac{1}{2}$ " (84 ")	10.50
$\frac{1}{4}$ " (42 ")	6.30
$\frac{1}{8}$ " (21 ")	4.20
1-16" (10 ")	2.00

Unless you have a satisfactory rating with either Dun's or Bradstreet's Commercial Agency, or can give us satisfactory Bank Reference, or have already had sufficient dealings with us to satisfy us of your financial reliability, the cash must accompany your order. If, however, you have either of the above three requirements and your order is for space amounting to over \$2.00 we will neither require nor ask for a single cent's pay until we prove to you

1st—By our printer's affidavit that we have issued 20,000 copies of March OöLOGIST

2d—By our P. O. postage receipts that we have mailed at least 15,000 of the number.

THE EXPENSE OF MAILING 20,000 CIRCULARS.

To print and mail a 2-page circular the size of a page in the **Oölogist** would cost you from \$300 to \$400. We will print you a 2-page advertisement in March **Oölogist** for **only \$33.60 or at one-tenth** the cost of printing the circular. An advertisement in March **Oölogist** would stand a much better chance of being preserved than the circular, and while the expense would not be a tithe of that in the issuance of the circular, we are confident that the *results*, which we are all after, would be largely in favor of the **Oölogist**.

OUR BUSINESS AND THE CLASS WHOM IT INTERESTS.



The above cut tells you our business, and it is with people that are interested in this business that every copy of March **Oölogist** will be placed.

They are of what is known as the "better class"—a well to do, thoughtful, intelligent class—composed of Business men; Professional men; Students, Teachers and Professors in our High Schools and Colleges. A class who spend at least a week or so each year in an outing or vacation. A class who as a rule are more or less interested in Field Sports. And last but not least, a class who are regarded by the general public as "cranks" because they have a hobby in the curio or specimen line, in which they are deeply interested and in which the general public can neither understand nor hardly appreciate.

They are, however, a profitable class "to work." We have tried it and know whereof we speak. We are also a pair of 'em and have been "worked"—nobody knows better than ourselves our "failings" or inclinations to purchase or obtain anything in which we are interested, regardless, to whether it is advisable for us to do so or not.

We offer you space in this March **Oölogist** at a nominal rate. If you think you can profitably accept it, do so *at once*, a like opportunity will not occur for many moons, perhaps never.



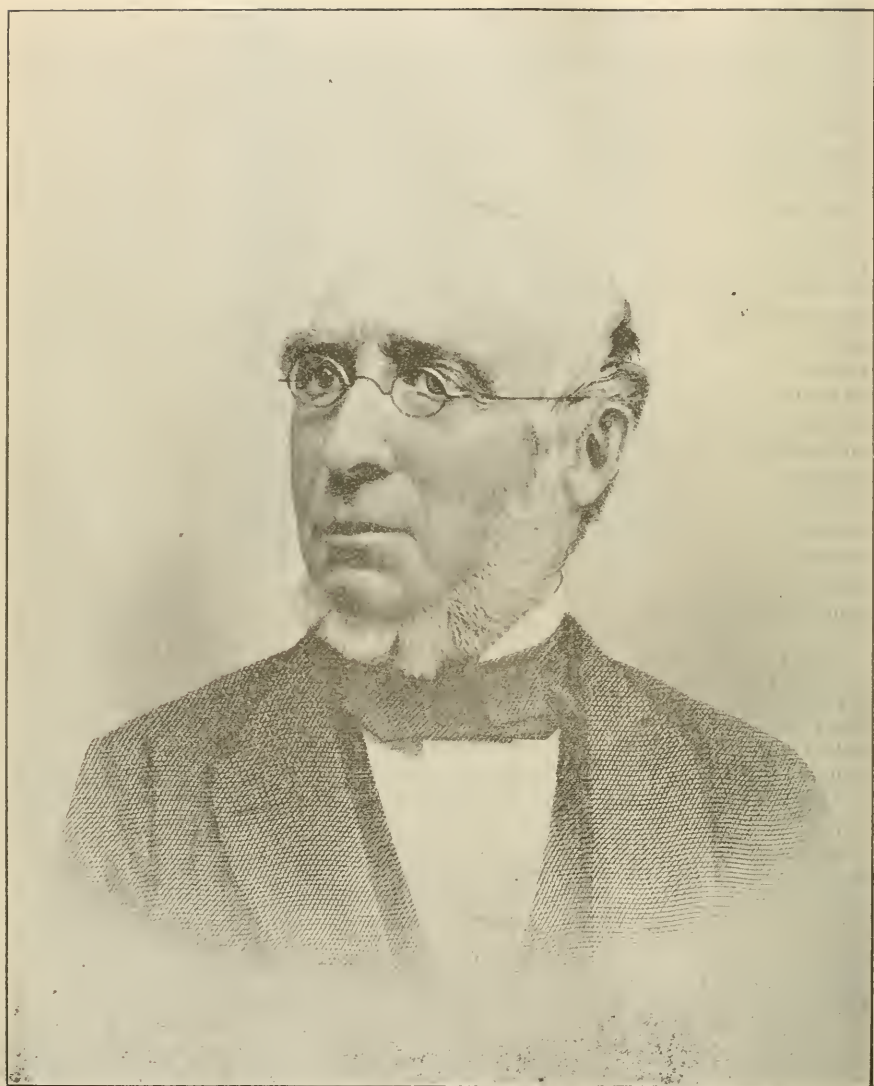
All copy must be in not later than Feb. 25th. Let us hear from you as early as possible.

Faithfully,

F. H. LATTIN & CO.,

Publishers of the Oölogist.

Albion, N. Y.



Geo. N. Lawrence.

THE OÖLOGIST.

VOL. XI. NO. 2.

ALBION, N. Y., FEB., 1894.

WHOLE No. 100

George Newbold Lawrence.

It is with no small amount of gratification that we present to the readers of the OÖLOGIST this month a picture and biographical sketch of a man who from a standpoint of years and labors accomplished, can be well ranked as not only the father but the grandfather, yes—the great-grandfather of living ornithologists. For a number of years the subject of our sketch has been a subscriber of the OÖLOGIST, and with such regularity has been his renewal, usually accompanied with an order for other material, that the writer has of late years, as the Holiday season approached, rather looked for the well-known chirography of Mr. Lawrence. On December 18, 1893, we received from him the following letter:

NEW YORK, Dec. 17, 1893.

"As I hope soon to dispose of my Natural History library, I am stopping all subscriptions to scientific publications, therefore, please discontinue my subscription to the OÖLOGIST with the completion of the present volume.

I have been confined to my room for over two months, but am now getting better. I can read but little, and several of your late numbers remain unread. As I am now in my 88th year, it is about time to let up a little.

In getting the OÖLOGIST into volumes the following are missing. I think they could not have come, as I kept them all in one place. I am willing to pay for them, as I want the volumes complete.

Yours truly,

GEO. N. LAWRENCE.

Immediately upon receipt of this letter the Publishers of the OÖLOGIST called a special meeting at which they created a very exclusive order in connection with their little monthly, viz:—that of an "Honorary Life Member" as we have previously stated, this order is a very exclusive one and for the present

at least is restricted to a single member. To this membership Mr. Geo. N. Lawrence was most unanimously elected. The Chairman of this meeting at once informed Mr. L. of the new honors conferred on him and fully explained to him the beauties of this new order and requested him, in case he could not accept his election, to at least accept the OÖLOGIST from month to month as it came in his mail and if he could not use it to better advantage "to toss it in his waste basket"—in which case, under the conditions stipulated, its publishers being ignorant of its disposition could imagine all sorts of pleasant things.

In reply to our letter we received the following:

NEW YORK, Dec. 30, 1893.

I must apologize for not sooner answering your letter of the 22d. I have not been quite so well lately, and though anxious to write you, was unable to do so. I also wanted to look about the missing numbers. I am greatly obliged for those sent.

Now for your intention of honoring me. I certainly will not refuse the tendered membership and feel pleased by the compliment. I think I am Honorary Member of three important societies, and member or correspondent of about twenty; but I try and let honors sit lightly.

As I have stopped so many periodicals I will not object to the OÖLOGIST coming and hope I may be able to read it, certainly it will not go into the waste basket.

Wishing you a prosperous New Year,

I am, yours truly,

GEO. N. LAWRENCE.

In the naming of birds Mr. Lawrence has also been much honored, but no more than his labors merited. The genus *Lawrencias*, RIDGW. of Santo Domingo was named in honor to him as well as the following North American species of birds:

Myiarchus lawrencei, GIRAUD, Lawrence's Flycatcher.

Spinus lawrencei, CASSIN, Lawrence's Goldfinch.

Helmintophila lawrencei, HERRICK, Lawrence's Warbler (No. 20. A. O. U. Hyp. list).

In addition to the above, sixteen other species, chiefly Mexican, West Indian and South American, have been named in his honor. Below we give a biographical sketch of Mr. L. in full as published in Mr. L. S. Foster's "The Published Writings of George Newbold Lawrence, 1844-1891."* Our picture of Mr. Lawrence is a reproduction of a steel plate in this same work.

Mr. Lawrence's published writings, in accordance to Mr. Foster's Bibliographical and Chronological catalogue, number one hundred and twenty-one (121).

Spencer F. Baird, who has aptly been considered the Nestor of American ornithologists, possessed, besides the capacity for organization, the power of guiding as well as enkindling enthusiasm.

Fortunate was it for ornithological science when, in 1841, Prof. Baird and Mr. George N. Lawrence formed an acquaintanceship, which soon ripened into a close and lasting intimacy. Stimulated by this, Mr. Lawrence then commenced the scientific study of birds. From his earliest recollection, however, birds had attracted him and he had paid considerable attention to them.

George Newbold Lawrence was born in the city of New York, where he has always resided, on October 20, 1806. His parents were both of English stock; his father's ancestors, coming to this country in 1635, finally settled in New York, and those on his mother's side located in Burlington County, N. J. in 1681.

His business career was an active and successful one, he having at the early age of twenty entered into a partnership, with his father and others, in the wholesale drug business in New York City. In this he continued for thirty-six years, devoting assiduously his spare time to ornithology. In his earlier efforts to preserve bird-skins he endeavored to do so without removing the body of the

bird, lacking as yet the council of a skilled taxidermist. This indicates that he felt an irresistible spur to action, the impelling force of all earnest souls.

Repeatedly he was of service to the Smithsonian Institution in the details of outfitting expeditions for field work, and in many ways aided Prof. Baird in scientific matters. He took the initiative in organizing the Ober expedition to the Lesser Antilles.

He became a near neighbor of John James Audubon at about the close of the life of that illustrious naturalist, and was very familiar with his sons Victor and John. For the many years covered by his activity in ornithology he has conducted an extensive correspondence, embracing most of the naturalists throughout the world, particularly those interested in ornithology.

His collection of bird-skins of great scientific value, numbering about 8,600 specimens, and containing some 300 types of new species of birds, was deposited in the American Museum of Natural History, New York City, in May, 1887.

He joined The Lyceum of Natural History in the City of New York in 1845, and now is a member, a fellow and a patron of its successor, The New York Academy of Sciences. Upon the organization of The American Ornithologists' Union, in 1883, he became an active member, and at its Eight Congress, November, 1890, he was elected an honorary member. Of the Linnean Society of New York, he likewise is an honorary member, having been chosen as such April 13, 1878. The British Ornithologists' Union made him a foreign member in 1872, and he is also connected with a large number of kindred societies in this and other countries.

Throughout his scientific career Mr. Lawrence has commanded the confidence and respect of all of his contemporaries, with many of whom he has formed cordial friendships, and it is with amazement that we consider the long list of great names, from Vieillot to the present time, that since the birth of Mr. Lawrence have impressed indelibly the brilliancy of their splendid genius on American ornithology. Wilson, Audubon, Bonaparte, Brewer, Nuttall, Baird, Cassin, Giraud, DeKay, and many more have come, and passed on, during the stretch of one life. Of a verity American ornithological science has been favored in its leaders during the last fourscore years.

* Bulletin of the United States National Museum, No. 40. Bibliographies of American Naturalists: IV. The Published Writings of George Newbold Lawrence, 1844-1891, by L. S. Foster, Washington, Smithsonian Institution, 1892.

The beneficial influence of the labors of Mr. Lawrence, with pen and pencil, on the progress of American ornithology has been great and undisputed, but it was particularly among the avifauna of the West Indies, Mexico, Central and South America that his most strenuous efforts were exerted. All but 17 of the 319 new species of birds described by him came from that region. Endowed with great power of analysis and a remarkable patience, he applied these to the investigation of specific distinctions, and his conclusions have but rarely been questioned.

A scrutiny of the titles of his numerous papers will fully indicate the wide scope and excellent character of the work of this veteran ornithologist.

A Letter from John B. Hindtime.

DEAR MR. EDITOR:

Having heard from a cousin of mine who is a collector of birds eggs that you publish a paper on this subject, I thought my long and varied experience in this line might qualify me to write something of value for your journal. I have collected steadily for two years, and have formed a fine collection of one hundred and twenty *odd* species, the entire collection containing about one thousand eggs, many of which are rare in this vicinity and I may say rare in the state. Formerly I had no taste for collecting, but learning that my cousin was forming a cabinet, and seeing that most of the fellows around here were getting up museums, I fell into line and was delighted with my success for I now have a large and unique collection. I shall visit my cousin soon to see how his collection compares with mine.

This is a fine locality for collecting. Robins, Bluebirds, Jays, and other species abound, and frequently I see specimens of French Mockingbirds and Gray Mockingbirds, with an occasional Hawk, Owl or Crow. On my last ramble I saw several Hawks flying overhead in cycles and epicycles, and my heart thrilled at the sight of these noble birds. I highly prize the single

specimen of their eggs, which I found in a hole in a dead tree. It cost me a hard climb, and I was surprised to find them laying in such a place, but as I shot the old bird sitting in the tree I am positive of my great find.

Perhaps a few words upon preparing birds' eggs may not be amiss from me, as another season is about to begin, and my experience in blowing eggs should have taught me some valuable lessons.

For piercing the shell I formerly used a darning-needle, but recently I procured a three-sided needle from the carriage-maker, and I find this is an improvement upon my first implement, as by gently rotating it I can pierce the shell with less danger of breakage. Natural philosophy teaches that to secure a flow of liquid from an air-tight cavity two holes are necessary, the reason for which requires no discussion here. The larger hole I always make first in the larger end of the egg, by piercing a small ring of fine holes and then breaking away the part enclosed in the ring. The reason I make a ring of small holes is that when I pick out the part enclosed there is no great danger of cracking the other parts of the shell, which will frequently happen, however, with an inexperienced egg-blowist. The large opening need not be more than one-fourth of an inch in diameter, except in cases of heavily incubated eggs, when the outlet may be enlarged to meet the conditions. None of my eggs contain holes more than one-half an inch in diameter.

The second hole in the smaller end of the egg I make quite small, as air will enter through the very smallest aperture, and I think it spoils the looks of eggs to have two large holes. Applying the lips to the smaller aperture, I blow gently, taking care not to burst the shell by sudden puffs. Sometimes hard blowing is necessary, but patient work is always rewarded, and the

smallest and most heavily incubated eggs can easily be blown *by making the opening large enough and by blowing long enough.*

When I wrote to my cousin describing my method of blowing eggs he replied that he had a trick of blowing them through *one* hole in the *side*, which he learned from reading your paper. When I visit him I shall see what there is in it.

Some of the collectors in this neighborhood have little cards upon which they write the date, species, locality and other items concerning the eggs they find. They place these cards, which they call *datas*, with the eggs in their museums. I do not need these *datas*, for I am familiar with the eggs of this region and know the history of all the eggs in my collection. It is also a great bother to fill out a *data* for every egg one finds. And then when one is showing his collection to his friends, it is a great display of knowledge to know each egg by name, though frequently the eggs of various species do resemble one another in a perplexing degree, but I have some little point which I always note and thus fix the eggs of each species in my mind. Sometimes I write the name upon the eggs and thus avoid any mistake, and am saved the trouble of filling out the little *datas*.

Many of the species represented in my collection are in no other collection in this vicinity. I have a fine egg of the Turkey Buzzard, which I found in a nest in the top of a large maple in a grove. I was collecting one afternoon this spring, when I observed the Turkey Buzzard fly from the trees some distance ahead, and highly excited I rushed forward to find a large nest high in the maples. I seldom climb into the treetops for nests, as one so frequently finds them empty and I dislike climbing for nothing. But I felt that this was an opportunity too good to be lost, for I knew that no other collector hereabouts had eggs of this species in his

cabinet. I clambered up the tree and mounted to the nest, which had previously been occupied by Crows, and in it I found one egg of a pale blue color. I was somewhat disappointed in the size of the egg, which I imagined would be larger, but I was too elated over my great find to complain. The egg is now snugly packed away out of sight and harm's way until fall, when I shall send my collection to the county fair and spring a grand surprise on the boys who intend to send their collections for competition.

I make it a rule to take all the eggs I find, for in case of breakage in carrying, blowing or handling, I can replace any eggs broken and thus fill out the sets. Also I have heard that it is the thing to have a series of eggs of the different birds of the vicinity, and by taking all the eggs I find, I can form full series. My series of Catbird eggs embraces thirty-five specimens, and I have a choice series of twenty-four eggs of the Turtle Dove. Then by taking all the eggs I am able to secure specimens of species not in other collections.

If the eggs are unfamiliar to me I refer to the "Universal Handbook of Ornithology," for which I paid one dollar, and by its help I can easily determine the names of all my eggs. From the use of this book I find that many birds breed around here which are generally thought to breed beyond our limits. I advise every collector to have a copy of some good work on ornithology by which he can study up on the birds he meets.

If you see fit to publish this in your paper please send me a few extra copies to hand to my friends, as I wish them to know I am writing for the paper.

Yours,

JOHN B. HINDTIME.

P. S. I neglected to mail the foregoing letter on time, and since it was written I visited my cousin and examined the eggs in his museum.

Mr. Editor he has a trick of blowing eggs through one hole, and a small one too, in the side, and I must have a set of those instruments for preparing eggs. I saw a copy of your paper in his desk, and I find your terms are only fifty cents a year, while I paid one dollar for my "Universal Handbook," which my cousin says is a fraud. He tells me that all the best books on ornithology are advertised in your paper, as well as the latest ideas on oölogy, and I enclose fifty cents for a year's subscrip-

tion. I will start in earnest and in the fall I will spring a real surprise on the boys.
J. B. H.

[We print John's interesting and startling letter in full, and trust that the moral which may be readily deduced by its perusal, will set many of the OÖLOGIST's younger readers to seriously thinking, and should they decide or question as to whether there is not a striking similarity between John's and their own experience, we would suggest that they drop egg collecting and take up stamps or coins, unless like John, they decide to begin anew and strive to be a true oölogist as defined in December OÖLOGIST.—Eds.]

Watching Flickers.

The winter of '93 here in Minnesota was exceptionally cold, and when about the 1st of April the sun came out from the clouds and the large drifts began to melt away everyone was glad to see spring once more.

Every day after this the snow seemed to gradually disappear and the days grew gradually warmer. Flocks of birds were seen migrating and once in a while a single crow. More birds were seen every day and most of them busy searching for food.

But what a change when one morning I woke up to realize that it was five degrees below zero and six inches of snow on the ground. Hardly a bird was to be seen and those that were seen at all were flying back and forth in search of refuge.

Upon dressing and going out to the barn I found quite an assemblage of birds, who in a very uncomplimentary manner, took to flight at my approach. During the day the weather grew warmer and at noon the thermometer was just zero. The next morning the thermometer stood about one below zero and by noon it was quite warm. The snow melted almost all day and the next morning bare places could be seen and especially around trees, revealing the grass and a few acorns.

That night upon coming into my room I heard a fluttering of wings, and on lighting a lamp I found a Flicker flying around the room and recklessly dashing with its long beak into anything that came in its way.

I suppose it had flown into the room to escape the cold, the window being open. I went down stairs and found a small starch box and after quite a chase succeeded in capturing him. I cut a small hole in the top of the box for air, and then retired.

The next morning I thought I would have some fun with my captive, so I took the box out in a grove back of the house, set it down on the snow and then went back into the barn to watch for further developments.

At first all I could hear was the Flicker drumming at intervals, but soon I heard drummings from other places, and on looking closely, discovered eight other Flickers on different trees and all of them quite near the box. First the one in the box would drum away and then another until each had had its turn, and then they would start over again.

In a little while all drumming stopped and I noticed that they were gradually getting nearer to the box. Finally one of them flew upon the box, and at once the bird inside began to drum. When he stopped the one on top seemed to answer, and then both began to peck around the air hole. Then another and another Flicker came to help until there were four birds on the box, pecking at the hole and endeavoring to free their friend inside.

Thinking that I might catch some more of these birds, I fixed a box-trap near the caged bird so that I could operate it from the barn by a long string. Then I threw a handful of wheat under the trap as bait. I noticed for the first time a swarm of birds on the barn. I think there must have been fifty at least and most of them Sparrows and

Bluebirds. All of them were silent and still and seemed to understand that something queer was going on.

I will not relate how I caught each Flicker. Suffice it to say that after a few failures and about two hours' work I succeeded in catching five more Flickers.

As soon as I sprung the trap the first time I heard a sort of fluttering on the roof and on going out I could see the birds who were on the barn flying off in all directions, probably alarmed by the falling of the trap.

I put the five Flickers in boxes and fed them for a few days, but when one of them died I concluded it would be best to let them go as they would probably share the same fate soon. After I let them go they disappeared and I was rather sorry because I liked to watch them.

I think there is nothing more interesting than to watch birds who are placed in peculiar circumstances.

PLAX,

St. Anthony Park, Minn.

Finding a Nest of the Hooded Merganser.

I have known for a number of years, that the Hooded Merganser has nested along the Grand River, but have never been able to find one until last year.

On or about the first of May, '93, while fishing on the banks of the river, I saw a female Hooded Merganser fly down into the river to feed, and then fly back into the woods about 30 rods, where it was low and marshy, and light in the top of an old elm stub over 40 feet high and 5 feet in diameter. I afterwards told some boys of my discovery. The next day we took climbers and ropes and set out to climb the stub, which I assure you was a very difficult task. Finally one of the boys succeeded in climbing it.

There were two prongs at the top,

and he found the nest in the larger one about 4 feet down. The Duck was on and flew off about the time he discovered it. The nest was lined with feathers and down and contained seven eggs of a pearly white color.

In order to get them he cut a hole through the side of the tree on a level with the nest and took them out that way, lowering them one at a time in a box made for that purpose.

We found in trying to drill them they were so hard that an ordinary drill would not penetrate them. My father made me a drill with which I finally succeeded in drilling them, and found them badly incubated, but with care and patience I succeeded in getting some extra fine specimens. The largest measured 2.25x1.75 and the smallest 2.12x1.56.

Had I made oölogy a study ten years ago, as I have since taking the Oölogist, I could have made a very valuable collection of duck's eggs, as the Hooded Merganser, Mallard and Wood Duck nested all along the Grand River and its tributaries, until within a few years,

FRANK H. LORD.

Saranac, Mich.

A White Grackle.

On October 10 or 12, 1893, a farmer named Dean Miller shot a White Grackle on his farm one mile west of here. It was with a flock of Grackles that were feeding in a corn field. He shot it and then had a Taxidermist mount it.

The bird is pure white without the slightest trace of black, the bill is of a cream color, the feet are white with a grayish tint and the eyes are light yellow with black pupils.

The bird's structure shows it to be of the Grackle species and in all it is a very handsome specimen.

F. A. COLBY,

Beatrice, Neb.

THE OÖLOGIST,

A Monthly Magazine Devoted to
OÖLOGY AND ORNITHOLOGY.

F. H. LATTIN, & CO., Publishers.
ALBION, N. Y.

FRANK H. LATTIN, WALTER F. WEBB,
Editors.

Correspondence and Items of Interest to the student of Birds, their Nests and Eggs, solicited from all.

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ENTERED AT THE POST OFFICE AT ALBION, N. Y., AS SECOND-CLASS MATTER.

Mr. Howard Cudlip died at the home of his father, Washington, D. C., in October last.

Wm. G. Smith, formerly of Loveland, Colorado, is now conducting an eating house in Deal, England. If Friend S. makes as good a landlord as he is a naturalist his house will be full to overflowing at all times.

Mr. J. P. Newell, Jr. of Carthage, Mo. writes of taking 14 eggs from a nest of the Red-shafted Flicker besides leaving four to hatch.

We are indebted to Messrs. Bradford & Beadles of Mayfield, Ky. for an invitation to the Third Annual Supper of the K. K. K. (Hunting and Fishing) Club. The supper was served in old fashioned camp style and the following was the Bill of Fare: *Fish*. Crop-pie: broiled, fried; Trout: broiled, fried. *Game*. Bear: steak, roast; Venison: steak, roast; Quail: broiled; Duck: baked stewed; Squirrel: broiled; K. K. K.: camp stew; Rabbit: barbecued. *Breads*. Corn Light Bread; Baker's Bread. *Crackers, Pickles, Catsup, Onions, Worcester Sauce, K. K. K. Coffee, Water*. The Menu cards were elegant souvenirs of the occasion. Sorry we couldn't have been there.

Frauds Again.

I am very sorry to be compelled to warn my ornithological brethren against any party who offers such eggs as:—Pac. Kittiwake, Pac. Fulmer, Pelagic Cormorant, Arizona Pyrrhoxia and many other such like sub-specific rarities. It has painfully dawned upon me that parties who offer such eggs as the above "in exchange for common species" are to be absolutely avoided if one would escape mortification and loss.

Let me embellish this warning with a bit of humor. A set of "Rusty" Grackle offered me with sets of the above showed, when examined with a microscope, some erasures, but the small end of one egg bore, boldly, the following overlooked inscription—"360½". This particular egg, then, had at some time done duty as an egg of the "Smoky-fronted Jay." Truly, there is fun, sometimes, even in failure.

P. B. PEABODY,
Owatonna, Minn.

Some Winter Bird Notes

Perhaps at no season of the year is consistent study more remunerative to the ever observant student of ornithology, than in winter. The spring-time and summer, when the cleared field and the woodland, the marsh and treacherous slough alike present the activity of a "Cherokee Strip," as the feathered hosts return to take possession and rear their broods, excite our enthusiasm as we note the industry and the thought displayed on every hand. In winter our admiration is great as we note the hardships so bravely met, the reason, tact, and wit, displayed by those daring little fellows who, when the pomp and color of the annual migratory ranks has passed, remain to battle with frosty blast and driven sleet and often look without despair, upon starvation in its many threats. Now is brought out the inherent dispositions, so various in the different species, as each thought, each nerve is strained to procure food and detect the many natural enemies. Not only is the utmost diligence required but reason, undisguised, is made apparent in each act. The summer of plenty and content brings forth, in the lower forms as in the highest, the happiness, the gayety, attendant upon success. With man in the arctic wilderness in winter and with birds exposed to the same conditions, we find the natures altered, the altitude changed from one of exuberance to that of grave reasoning and utmost industry as necessity compels.

Then in winter we may learn much of a bird's depth of thought which it may command as environment requires.

Very noticeable, during my almost daily walks about the fields, has been the apparent absence of three of our most common and regular winter residents: the Tree Sparrow, *Spizella monticola*, the Junco, *Junco hyemalis*,

and the Prairie Horned Lark, *Otocoris alpestris fraticola*. These are usually to be found in abundance in winter,—the Tree Sparrows and Horned Larks in the fields feeding upon the seeds of weeds, which have been allowed to stand, and the Juncos more frequently about the shubbery and kitchen door. The Juncos came here in the fall as usual with the Tree Sparrows, but I have seen neither since October 28th, '93. Where these birds are if they are present at all, I am at loss to know.

Sometime ago, a laborer came to me with the information that a "big hawk" was flying round and round a marshy pond which he had chanced to pass. I immediately set forth, for it was already nearly dark. When I came within sight, a large bird which I at first took to be a male Marsh Hawk, was soaring above the coarse grass and snow, now and then swooping suddenly down to alight for a moment but as suddenly to take wing again. As I drew nearer I recognized it to be a Barred Owl, *Syrnium nebulosum*. Never before have I had so good a chance to study this owl's method of hunting. It is exceedingly active in flight, soaring fully two-thirds of the time, as would a hawk. Its agility in turning suddenly upward or downward and in wheeling about was remarkable, much after the fashion of the last. It was evidently in search of meadow mice. I was finally detected and his owl-ship made haste in escaping over the hills to the woodlands near.

In none of our winter birds is shown such a lovable disposition, combined with so much of modest beauty, as in our common Mourning Dove, *Zenaidura macroura*. This winter a flock, of about twenty, has made a farm yard its head quarters, picking up the corn and seeds, scattered in feeding the stock. These doves increase very fast, but many perish in our coldest winter weather. Many a cold morning have I found several of these tender birds.

huddled together by some stack so cold that I could pick them up in my hands. More often have I found them frozen stiff in a little group, entirely lifelike in position and appearance.

On December 6th, I observed for the first time, that great flocks of the Snow Bunting, *Plectrophenax nivalis* had appeared upon the wintry scene with all the zest of their frolicsome natures. They have interested me much. Their sudden appearance upon the bare ice of an open lake, where all would alight within the radius of a few feet, completely covering the surface, then their all as sudden and mystic departure to and among the surrounding hillsides, leaving the observer staring in amazement at "where they should be," and their altogether restless movements, render them almost dreamlike. Why they gather upon the ice and this is a very characteristic habit of theirs here, I have been unable, so far, to determine. Their quaint notes seem to convey to the mind a thought of homesickness. The half dozen specimens taken for my collection were very fat and I think that they will not lose flesh here in Michigan, if we may take their diet as data bearing upon this point. The crops contained a large per cent of wheat, taken from the surface of the fall-sown fields, with some seeds of the pigeon grass and other smaller ones not identified. It is surprising to see how soon these usually suspicious birds learn to regard the gunner with the utmost fear. Though not uncommon the Snow Bunting is not of regular occurrence in Washtenaw Co.

I wish that I might take you all, on some pleasant morning, one mile across the fields to the border of a lonely little swamp; at least so it is called, but here is a place of great attraction at present, to those who love the study of birds. At this place in the late fall some dogs killed a sheep and nearly stripped it of flesh. Through the snow protrude the

ghastly ribs bearing bits of flesh, and this is our point of observation. In quest of the frozen bits of meat come Downy and Hairy Woodpeckers, Blue Jays, Chickadees, White breasted Nuthatches, and a huge Red-tailed Hawk. Here I have watched all but the *Buteo* at one time, and as they tug and quarrel and scream their different temperaments are shown superbly. How different from the dainty Chickadee, as he peeks away at some tiny morsel, is the rowdyish onslaught of, that bully among birds, the Blue Jay. How different from either is the fierceness with which the mighty Red-tail hauls and twists on some ligament or tendon with beak and talons. Yet all have in view the one object, food.

Again we find the Great Horned Owl, *Bubo virginianus*, charged with crime and in custody. A neighbor hearing cries from his ill-protected fowls, one moonlight night, rushed from the house, gun in hand, just in time to take a wing-shot at one of these magnificent birds. The charge of shot merely tipped its wing and it was taken alive. It has quite recovered, and is now in my possession, a fine mate for one of its kind which I have reared from a downy chick. Here, as in other places, the farmer neither appreciates nor cares to understand, as a rule, the good which the Hawks and the Owls do him. He has, in the township, voted a twenty-five cent bounty for each Hawk or Owl head presented at the office of the Town Clerk. Crows are honored with a valuation of fifteen cents per head. Hence, every small boy and lazy man is trying to earn a living, by killing the grandest, the most imposing order of birds our country affords. Yet the stealthy cat and howling cur go free, doing more damage to fowls than all other marauders put together. A few misdemeanors credited to these birds, however, condemn them all, and the true lover of birds stands aghast at the wan-

ton slaughter. Of late a fine Bald Eagle's head was presented for bounty. the *learned* clerk registered "Hawk" and paid the sum.

In closing these rambling notes I will but add that there are fewer birds here this winter, so far, than I have ever known before. No straggler from the North has come to reward my ardent search. In vain have I looked for rare Hawks, Owls, Grosbeaks or Crossbills etc. In their absence however I will have more time to devote to our most common species which are ever with us and which we should most thoroughly understand.

L. WHITNEY WATKINS.
Manchester, Mich.

Along the Outlet Creek.

Ballston Lake is a narrow little sheet of water about three miles long, and drained by a creek, which, for the first mile or so, flows through an extensive muck swamp, part of which is underlaid with shell marl of an unknown depth.

The wagon road across this swamp at the outlet of the lake is constantly settling and requires filling in every few years to keep it from sinking below the water level.

From the lower end of this swamp to the bridge at the lake is part of a favorite collecting trip; the swamp is well wooded with elm, soft maple, and ash trees and Red-shouldered Hawk's nests are quite common. I took two sets of their eggs there last spring, also one set of Cooper's and one of Broad-wing's.

One day this fall I was through there looking for ducks on the "Outlet Creek;" the trip was not a success as a duck hunt, as I saw but two ducks (*Anas obscura*), but I saw the first living Great Blue Heron I ever came across, for although the American Bittern and Green Heron frequent the low marshy lands, the Great Blue is only occasionally met

with; a friend of mine has one stuffed that was shot in this town.

As I continued up the creek, flocks of noisy Blackbirds began to fly over and I soon came upon a large flock of Grackles, Robins, Red-wings and Cowbirds, the first two named singing their sweetest songs, and the others joining in now and then, and all flitting and hopping hither and thither among the trees and bushes hunting their living.

I once had a tame Robin that I took as a nestling, that used to sing, oh! such sweet, tender, loving little songs, and his joyous whistle could be heard a block away, but till now I had never heard such demonstrations from the wild Robins, nor did I know what sweet music the common chattering Purple Grackle could make.

They seemed fairly bubbling over with happiness and love of mother Nature, and of the good God who cares so wisely for them. As night was coming I had to hurry home, but I felt a closer acquaintance with my little feathered friends than had before been my privilege.

B. A. G.
Ballston Spa, N. Y.

The Spring and Summer Birds of Central Park New York.

A large number of birds, while wending their way northward on their Spring migration, stop for a few days in Central Park, N. Y. before continuing their journey towards their accustomed breeding places. Quite a few of these visitors seem to be so pleased with their short visits, that they decide to stop with us during the breeding season, and so create a good field for the Ornithologist in the centre of a large and prosperous city.

I spent most of my time during the early morning hours of May, 1893, in observation of the birds that passed through the park during this month,

and was much pleased with the list that I was able to secure, the Warbler family seeming especially abundant.

The following is a list of birds seen by me in Central Park during May, 1893.

American Herring Gull, Green Heron, Black-crowned Night Heron, Spotted Sandpiper, Red-shouldered Hawk, Yellow-billed Cuckoo, Black-billed Cuckoo, Belted Kingfisher, Downy Woodpecker, Flicker, Night-hawk, Chimney Swift, Ruby-throated Hummingbird, Kingbird, Phoebe, Blue Jay, American Crow, Fish Crow, Cowbird, Red-winged Blackbird, Baltimore Oriole, Purple Grackle, Redpoll, American Goldfinch, White-throated Sparrow, Chipping Sparrow, Field Sparrow, Song Sparrow, Swamp Sparrow, Towhee, Cardinal, Scarlet Tanager, Barn Swallow, Rough-winged Swallow, Cedar Waxwing, Red-eyed Vireo, Warbling Vireo, Yellow-throated Vireo, White-eyed Vireo, Black and White Warbler, Worm-eating Warbler, Blue-winged Warbler, Parula Warbler, Yellow Warbler, Black-throated Blue Warbler, Myrtle Warbler, Magnolia Warbler, Chestnut-sided Warbler, Black-poll Warbler, Blackburnian Warbler, Black-throated Green Warbler, Yellow Palm Warbler, Oven Bird, Maryland Yellowthroat, Canadian Warbler, American Redstart, Catbird, Brown Thrasher, House Wren, Brown Creeper, White-breasted Nuthatch, Chickadee, Ruby-crowned Kinglet, Wood Thrush, Wilson's Thrush, Olive-backed Thrush, Hermit Thrush, American Robin, Bluebird, European Goldfinch, English Skylark, and the ever present English Sparrow.

Among all the birds that stop to breed in Central Park, the Cardinal Grosbeak is one of the most attractive. About May 15th these brightly colored visitors commence housekeeping; they choose some secluded spot, distant from any path, and there build their large compact nest, generally placing it in the

centre of a thick bush, well hidden from the sight of any mischievous boy or watchful egg collector.

The White-breasted Nuthatch, Song Sparrow and Robin, are among the first arrivals in the Spring, and they too stop with us during the breeding season and raise their broods in suitable spots in the park; they not only spend the summer with us but occasionally the Winter also.

The European Goldfinch is a regular breeder in the park, and, and makes a welcome addition to our breeding birds. In Winter I have often seen a large flock of this industrious species searching for their sustenance among the dead leaves and bushes of the ramble.

The English Skylark has been introduced into this country and I believe is becoming more numerous every year. Last season a pair of these birds built a nest in the corner of the roof of the Museum of Natural History, and succeeded in raising a brood there.

The Wood Thrush and Catbird are very well represented during Spring and Summer, and like the Cardinal Grosbeak select the most secluded spots to build their nest.

Very few of the Warblers are found during the breeding season in Central Park, although I have several times discovered a nest of the Yellow Warbler, which invariably contained a Cowbird's egg; this impostor not even permits the birds of the City to raise their broods in peace, but imposes upon them the responsibility of caring for one of their deceitful race.

WM. Y. HAWLEY.

Great Horned Owl.

F. C. HUBBARD, GENEVA, O.

Bubo Virginianus (GMEL) Great Horned Owl is well represented in and around Ashtabula County. During the season of 1893 three were secured by

sportsmen, and Charles Maltbie, a poultry raiser on the outskirts of Geneva, poisoned a male and female. Some of his chickens were in the habit of roosting on the fence surrounding the park in preference to the coop and one morning when Mr. M. went to feed them he found one of his best Minorca hens half eaten up, and supposed it to be the work of a skunk or some other animal. Thinking the destroyer might return the next night to finish the chicken, he left it in the same position and sprinkled it with strychnine. He was rewarded next morning by finding not a skunk but a Great Horned Owl which proved to be a male, and still alive; it ate too much of the drugged meat to get away. The following morning a female Owl was found in the same condition; neither were dead and would snap viciously when poked with a stick. On giving them a little water the strychnine quickly did its work. Mr. M. has had a great deal of trouble with these birds.

The following story rivals the Eagle who carried off the babe: It was in the year of '85 that I had a small terrier that came very near being carried off by one of these birds. It was just growing dark and I was returning from my work and just entered the lane leading to the barn when I heard the dog begin to howl in a most piteous manner in the direction of the front yard but did not think much of it, supposed some one had hit him; but when he had howled for a minute or so I began to think something was wrong, and on running around the house, what should I see but one of these pesky birds trying to carry off the dog. The dog soon proved to big a load for the Owl and he slowly descended to the ground, dropped the dog and started to fly off, but Jim, who had been waiting an opportunity during the struggle was too quick for him and 'peppered' him with a big charge of buckshot. I had him stuffed and you can see him by coming into

the house, which we made haste to do. He was the finest specimen of the Great Horned Owl I ever saw.

So far I have been unable to find any of their nests but hope to secure a set of eggs the coming season.

White-throated Sparrow in St. Lawrence Co.,
N. Y.

July 19, 1893. As I was entering a narrow piece of evergreen, chiefly cedar, woods, situated in a rather low place, I flushed a White-throated Sparrow, (*Zonotrichia albicollis*) from her nest of four eggs. It was placed on the ground near a fallen tree, and was pretty well concealed by the grass and a bunch of ferns which overhung it.

The nest was a fine, compact structure, composed of grasses, weeds, stalks, etc., and lined with fine grass and horse hair.

The eggs resembled those of the Song Sparrow in size and markings, but were rather lighter and less heavily marked than the general run of Song Sparrows. On blowing one of them I found incubation to be considerably advanced. This egg measured .81x.61.

Two days later I visited the nest and found the female on it. I approached within three or four feet of her, so close that I could plainly see the yellow extending from base of bill to eye, before she left the nest.

This is the only instance of this Sparrow's breeding here that has come under my notice. Davie says they breed in Northern New York, "nesting in June." This, then, was probably a second set.

C. HOUGHTON.
Potsdam, N. Y.

Bohemian Waxwings.

On the 14th of Jan., '91 on coming out of a neighbor's house I noticed a large flock of birds on a tree across the

street and on going closer, to my surprise, found them to be Bohemian Waxwings, two hundred or more; but being away from home and not knowing where to borrow a gun handy I was obliged to leave them.

Again in March I saw a flock of Cedar Waxwings alight in a mountain ash picking berries that remain on during the winter. Upon coming close to them I noticed four or five Bohemians in company with them.

Saturday, Dec. 16, '93. Again to-day I saw five Bohemians in a mountain ash feeding, but no chance to secure one; also one Robin in their company. Of the latter I have seen from one to a dozen all winter. They feed on mountain ash berries also and stay until gone.

W. E. WEBSTER,
Oskosh, Wis.

Bald Eagles in Missouri.

Nov. 15, 1893. I have just skinned a very large specimen of the Bald Eagle that was shot about seven miles north of here. It measured seven feet from tip to tip, was three feet long, weighed fifteen and a half pounds and was very fat. It was shot with No. nine shot while flying. This bird makes the fifth Eagle that has been captured around here during the last summer and fall. I cannot account for their being here because the country is mostly open.

CURTIS WRIGHT, JR.,
Carthage, Mo.

Another Prolific Flicker.

Having recently read in Davie's "Nests and Eggs of North American Birds" concerning the layings of the Flicker, I found that it in a measure coincided with a similar experience of my own.

On the first of June, '93, as I was out collecting eggs, I discovered in an old oak tree about 20 feet from the ground,

a hollow. I noticed near by a pair of Flickers and thought that they were seeking this spot for a nest. Stepping behind a tree and carefully watching their movements I presently found that my thoughts were true.

As I knew that the female Flicker would soon begin laying I carefully watched this nest. Upon going to the nest one day I found that some small boys had discovered it also. I knew at once that I would have to watch the nest very carefully. Every day I took an egg from the nest until at last she ceased laying. I found to my surprise that I had taken 40 eggs in 40 days.

I am confident that these were the layings of a single Flicker as no other pair during this time was seen in the immediate vicinity.

R. A. SCHWEER,
Denton, Texas.

American White Pelican in Illinois.

Perhaps the largest water fowl and certainly one of the rarest specimens of ornithology ever seen in this vicinity was killed at Brooklyn, Illinois, three miles below here, by Mr. E. W. Johnson on the 29th of October, 1893.

The bird in question is a large pelican, has plumage unstained by blemishes of blood or dirt, is snowy white, save on the back and shoulders where a few dun-colored feathers are interspersed.

His kinsman, the Brown Pelican, is a frequent visitor in these parts, but rarely does the human eye see one of the big snowy, baggy-pouched birds on local water.

The dimensions of the bird are as follows: From one extended wing point to the other it measures eight feet, five inches. From the end of the long bill to the flabby feet is just sixty-one inches. The pouch beneath the fourteen-inch bill is fifteen inches in length

and eight in depth when stretched down.

Altogether it is a wonderfully handsome bird, and was secured by Charles Frye, the local taxidermist.

G. L. T., Paducah, Ky.

DECEMBER CONTEST.

Forty-five Judges.

Prize winners and credits received by each were as follows:

1. Raptures of Michigan, 190.
2. Scenes from the Life of Alexander Wilson, 147.
3. Notes on the Birds of Henry Co., Iowa, 94.
4. Collecting at Night, 67.
5. Oölogy, 54.

A years subscription to the OÖLOGISN was awarded to

A Nest of the Canvas-back, 49.

The Judges' prizes were awarded as follows:

1. No. 11. Fred W. Parkhurst, Bath, N. Y., exact.
2. No. 7. Stephen J. Adams, Cornish, Me., 1, 2, 3, 5, 4.
3. No. 44. Frank D. Weeks, Portland, Oregon, 1, 2, 3, 5, 4.
4. No. 43. Ellis F. Hadley, Dayton, Oregon, 1, 2, 4, 3, 5.
5. No. 41. A. W. Wallace, Montclair, N. J., 1, 2, 5, 3, 4.

No. 45. L. A. Hawley, New York City, was also awarded a "Standard Catalogue" for naming the winners.

All prizes were mailed on January 25th.

A New Species of Fish.

A guard tells a good story on a lady who was visiting a well-known Chicago lady, and was being shown by her through the Fisheries Building. She was in in the salt-water section of the aquarium, in the very thickest of the pushing, jostling, crowding mob that constantly gazed upon the caged deni-

zens of the deep. Pushing her way toward the tank where the toad-fishes disported themselves, she suddenly exclaimed:

"Do look at that great long fish, squirting water out of his nose! Isn't it wonderful!"

The long fish referred to was a lead water-pipe leading from the top to the bottom of the section: through which was sent a constant stream of salt water which came out in sprays through a number of little holes in the end of the pipe.

But she wasn't the only person who was deceived by these pipes that sprayed salt water in the various sections. Occasionally a countryman would be heard to exclaim:

"Gee whiz! look at that long eel! I never saw an eel squirt water that way before!"—From "*Undercurrents of Humor from the Fair*," in *Demorest's Family Magazine for January*.

Figures of Importance.

Examine the number following your name on the wrapper of this OÖLOGIST. This number denotes the time when your subscription expires or has expired.

56	signifies	your	subscription	expired	June,	1890
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74	"	"	"	"	Dec.	"
80	"	"	"	"	June,	1892
86	"	"	"	"	Dec.	"
92	"	"	"	"	June,	1893
98	"	"	"	"	Dec.	"
104	"	"	"	will expire	June,	1894
110	"	"	"	"	Dec.	"

We are desirous of straightening our subscription books at once and trust our subscribers will send in their subscriptions for '94 including all arrearages, at their earliest conveniences, the amounts necessary to accomplish this are as follows:

"56"—\$2.25. "62"—\$2.00. "68"—\$1.75. "74"—\$1.50
"80"—\$1.25. "86"—\$1.00. "92"—75c. "98"—50c.

Should you desire to discontinue your subscription to the OÖLOGIST your indebtedness to us is 50 cents less than the above amount. The figures are according to our books Jan. 20, 1894, and renewals received since that date have been credited on our books, but not on the wrapper.

From Mr. A. W. Baylis of Iowa we have received a pair of the slickest 1894 calendars that, as yet has been our privilege to gaze upon.—Many thanks.

The Young Oologist AND The Oologist

Comprising together the most popular magazine, devoted to Birds, their Nests and Eggs, ever published.

Appreciating their value, the publishers have reserved a limited quantity of each issue to supply future demands. They have now, all told,

LESS THAN FIFTY COPIES OF EACH ISSUE.

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Back numbers will soon be exceedingly rare and valuable and possibly not obtainable at any price

CONTENTS

The following table of contents enumerates some of the principal articles in each issue. The "short articles" mentioned are one column or less in length and are all of great value to the student.

Not mentioned in the list of contents, each issue contains one or two pages of "items" or "brief notes," one column to four pages of exchange notices, and from three to eight pages of advertisements, besides a "query column which occurs in many, although not all, issues.

THE YOUNG OOLOGIST.

VOLUME I. Nos. 1, 2, 3, 4, 5, and 12 each contain 16 pages. Nos. 6, 7, 8, 9, and 10 each contain 20 pages. No. 11 contains 36 pages.

No. 1.—Instructions for Collecting Birds' Eggs, (3 pages); Coues' Key; Twenty-four short articles. May, '84.

No. 2.—Instructions for Collecting Birds' Eggs, concluded, (2 pages); Painted Buntings; Cal. Mottled Owl; List of Birds Found at Montreal; 24 short articles. June, '84.

No. 3.—Maine Items; Yellow-headed Blackbird; Orchard Oriole; The Slip System; Wilson's Thrush; Hand-book of Agassiz Association; 23 short articles. July, '84.

No. 4.—Screech Owl; Importance of Identification; A La Heronry; Cardinal Crossbeak; Eagle's Nest; How to Make and Use Bird Lime; 14 short articles. Aug., '84.

No. 5.—Bird-nesting—To Collect Scientifically, (3 pages); Cal. Birds; From Wyoming; 22 short articles. Sept., '84.

No. 6.—Bobolink, (2½ pages); Sea Birds of Maine; Egging in Cal. Swamp; Old "Put" and the Bird's Nest; List of Wisconsin Birds; 12 short articles. Oct., '84.

No. 7.—Bronzed Grackle; Singular Duel; Fish Hawk; Spurred Towhee and Least Tit; Old "Put" and the Bird's Nest; Bird Island; 14 short articles. Nov., '84.

No. 8.—The Alligator; Collecting in Marshes; Woodcock; "Our Birds in Their Haunts," Iowa Notes; Redstart; Summer Redbird: 18 short articles. Dec., '84.

No. 9.—Baltimore Oriole; Texas Jottings; Sap-suckers; Barn Owl; American Ornithologists' Union, (3 pages); How to Handle a Gun; Black-capped Titmouse; Egg of the Moa. Jan.

No. 10.—Winter Wren; Cal. Duck Hunting; Screech Owl; *Davie's* Egg Check List; Peacock with Queer Tastes; White-bellied Nuthatch; Blue Jays; Spotted Robin Eggs; 8 short articles. Feb., '85.

No. 11.—Bank Swallow; English Sparrows; Study of Birds; Gt. Horned Owl; Yellow-billed Cuckoo; Gambel's Quail; Conn. Notes; Intelligence of the Oriole; Yellow-breast Chat; Maryland Yellow-throat; White-rumped Shrike; List of Pacific Coast Birds; Knights of Audubon; Sample Data Blanks, (4 pages); 32 short articles. March, '85.

No. 12.—*Complete Vol. I.* Title pages for binding, with complete and exhaustive index, (8 pages.) April, '85.

VOLUME II. consists of but two numbers. Each contains 32 pages.

No. 13.—Bartram's Gardens; South Carolina Observations, (6 pages); Scientific Names; Gt. Horned Owl; Bank Swallows; Knights of Audubon; Hummingbird; R. I. Notes; Texas Jottings; 30 short articles. May, '85.

No. 14.—American Crossbill; Audubon's Birds of America; Illinois Notes; Destruction of Birds; Cuckoos; Cal. notes; Wrens on the Warpath; Golden-winged Warbler; Fox Sparrow; Our Winter Birds; Snipe Creek; Red-head; Wisconsin Jottings; Burrowing Owl, etc.; A Florida Trip; Horned Lark; Queer Homes and Nesting sites; Brave Bird; Ferruginous Rough Leg; Sparrows; Pigmy Nuthatch; 26 short articles. June, '85.

THE OOLOGIST.

Volumes III. and IV. are Bi-Monthly. The remaining volumes are Monthly.

VOLUME III. each issue averages 12 pages.

No. 15.—Full page Frontispiece.—*American Water Outlets and Nest*; Chester Island and the Marsh Wrens; Birds of Cortland Co., N. Y., (4½ pages); A Cheap Cabinet; Nest of the Black-and-white Creeper; Summer Birds about Washington, D. C.; Davie's Nests and Eggs of N. A. Birds; Water Blowpipe; 5 Short Articles. Jan. & Feb., '86.

No. 16.—Vagary of a Collector (Great Horned Owl Climbing Strap); A Hunt for Tern Eggs; Birds of Cortland Co., N. Y.; Notes from North Carolina; Whip-Poor-Will; Nest of the Brown Creeper; Black-billed Cuckoo Depositing Eggs in a Yellow-billed Cuckoo's Nest; Cannibalism of the Red-headed Woodpecker; 23 short articles. March & April, '86.

No. 17.—History of a Bird-Box; Tree Sparrow; Nests of the Green Heron; Bird Notes from Iowa; A Difficult Climb after a Red-tailed Hawk's Nest; Review of the Check-Lists of N. A. Birds, with special Reference to the new A. O. U. List (3 pages); The State of Maine as a Field for the Ornithologist; 16 short articles. May & June, '86.

No. 18.—My first White Crane's Nest; Spring Notes; Notes from Chester County, Pa.; Turkey Buzzards; How to Make a Cabinet; Chewink Nests in a Tree; A Cabinet for a large Collection; 13 short articles. Jy. & Aug., '86.

No. 19.—Collecting on Long Island; Chimney Swift; A Day with the Loons; Illinois Bird-Nests; Marsh Wrens; A Plucky Wood Pewee;

THE OOLOGIST.

- Minnesota Notes; Yates County (N. Y.) Notes; 8 short articles. Sept. to Nov., '86.
- No. 20.—*Completes Volume 11.* Title pages for binding, with complete and exhaustive Index of Volumes II. and III. Dec., '86.
- VOLUME IV. Each issue averages 12 pages.
- No. 21.—Birds of Chester County, Penn. (10 pages); Chestnut-sided Warbler; Massachusetts Letter; Bills of Birds; 3 short articles.
- No. 22.—Notes from Spoon River Region, Illinois; Peculiarities of the Ruby-throated Hummingbird; Purple Gallinule; How to Collect; Bird Surgery; Rufous-vented and Bendire's Thrashers and Canon Towhee; Newsy Items; Notes from College Hill, Ohio; Nesting of our Swallows; Notes from Sullivan Co., N. Y.; Blue-Gray Gnatcatcher; Notes from Connecticut; Fidelity of the Song Sparrow; 13 short articles. March to May, '87.
- Nos. 23-24. Combined number.—Tour in the Woods at Fort Washington, Pa.; National Museum (Department of Birds, Nest and Eggs); Beaver County, Pa. Notes; Black-capped Chickadee; Hawking; Agassiz Association and its Work; Crow Roosts of New Jersey; Swainson's Warbler; Destroy the Cowbird; Trall's and Acadian Flycatchers; 7 short articles. June to Sept., '87.
- Nos. 25-26. Combined number.—Gannet; White Pelican; Black-capped Chickadee; Mockingbird; Late Collecting; Yellow-breasted Flycatcher; 5 short articles. Oct. to Dec., '87.
- VOLUME V. 16 pages each issue.
- No. 27.—Brown Thrasher; Bald Eagle; Shooting a Golden Eagle; Florida Jottings; Destructive Nesting (English Sparrow); Arctic Terns; Notes from Lincoln County, Maine; Acadian Flycatcher; Red-shafted Flicker; 14 short articles. Jan., '88.
- No. 28.—Title pages for binding, with complete and exhaustive Index of Volume IV.; Egg of *Epyornis Maximus*, the Colossal Bird of Madagascar (6½ pages); Fish Crow. Feb., '88.
- No. 29.—*Icterus spurius*; Water Blowpipe; Cardinal Grosbeak; Kansas Notes; A Moonlight Trip; Among the Coots on St. Clair Flats; Brown Thrush in Confinement; 9 short articles. March, '88.
- No. 30.—Boat-tailed Grackle; Destruction of our Native Birds (4 pages); Gleanings from Correspondence; Nest in a Horseshoe; 5 short articles. April, '88.
- No. 31.—Oology (Advice to Collectors); Bald Eagle; A Snipe Hunt; Notes taken at Norristown, Pa.; Nidification of *Ictinea mississippiensis*; Among the Warblers; Chestnut-sided Warbler; 6 short articles. May, '88.
- No. 32.—Family *Rallidae* in Michigan (3½ pages); Egg Collecting; Bird Voices; Road Runner; Notes on the Birds of Beaver, Pa.; 3 short articles. June, '88.
- No. 33.—Loon or Great Northern Diver (2 pages); Eggs of Mississippi Kite; Nesting of Brown Pelican; Breeding Habits of American Flamingo (3 pages); 3 short articles. July, '88.
- Nos. 34-35. Combined number.—Reminiscences of 1886; Trip to Seven Mile Beach; Defense of Leas, Bird work in Watkesha Co., Wisconsin; Great Ank; Arkansas Notes; Black Snowbird; Notes for Collectors; Some of our *Falconidae*; Jim (A Tame Crow); Buffalo International Fair; 8 short articles. Aug.-Sep.
- Nos. 36-37. Combined number.—American Osprey; A Day with the Gulls; Florida Notes; A Plea for the English Sparrow; Useful Contrivances; Game Laws; Notes from Lake County, Ohio; South Carolina Notes; A Pleasant Excursion; Sparrows and Cat; Hermit Thrush; Western House Wren; A Few Words to Observers; Flying Squirrels Occupying Birds' Nests; 15 short articles. Oct.-Nov.
- No. 38.—Ostrich Farming; An Afternoon's Collecting Trip; California Notes; Notes from St. Lawrence Co., N. Y.; Bird-Arrivals in N. E. Indiana; Bank Swallow; Faunal Changes, —DeKalb Co., Indiana; Audubon Monument; 10 short articles. Dec., '88.
- VOLUME VI. 20 pages each issue.
- No. 39.—Title pages for binding, with Complete and Exhaustive Index of Volume V.; Breeding Habits of the Bridled Tern; Wood Thrush and Brown Thrasher; From Western North Carolina; Birds of Broome Co., N. Y.; Peculiar Egg of *Corvus frugivorus*; Cuckoos; Notes from Alabama; Carolina Parakeet; 12 short articles. Jan., '89.
- No. 40.—A Red-headed Family (*Picidae*) (6½ pages); Raptures of Michigan; Wild Turkey; Birds of Iowa; The "Critic" Criticised; 8 short articles. Feb., '89.
- No. 41.—Directions for making a Bird or Mammal Skin; The Owl; A Crow Quandary; Birds of Macon County, Ga.; Collecting Experience; Story of a Tame Crow; 6 short articles. March, '89.
- No. 42.—Raptures of Michigan (3 pages); Nesting of the Tufted Tit; Peculiarities in Sets and Eggs of a Few of our Commoner Birds; Difference between White-rumped and Loggerhead Shrikes; Birds of Grafton Co., N. H.; Sample Pages of Davie's New Check-List; 6 short articles. April, '89.
- No. 43.—Avi-Fauna of Orleans County, N. Y. (6½ pages); The Robin; The Crow in the North; Bald Eagle's Nest; Mating Bird Skins; 3 short articles. May, '89.
- No. 44.—Birds of Matthews Co., Va.; Changes in the Nesting of Birds; Collecting Tour in Florida; Nesting of Pygmy Owl; Difference between White-rumped and Loggerhead Shrikes; Black-billed Cuckoo in Dakota; Datas; Nest of Marsh Hawk; 4 short articles.
- No. 45.—Michigan Notes (4½ pages); Arkansas Notes; Goldfinch in Confinement; Burrowing Owl; Our Reply; Gleanings from Correspondents; 6 short articles. July, '89.
- No. 46.—Notes from Hillsborough Co., Florida (2 pages); Shore Lark in Canada; Can Quails be Domesticated?; Red-tailed Hawk; Untimely End of a Set of Brown-headed Nuthatch Eggs; Broad-winged Hawk and black-capped Chickadee; Gleanings from Correspondents; Wilson Ornithological Chapter of the Agassiz Association; 4 short articles. Aug., '89.
- No. 47.—"Old Abe" Jr.; A Day's Collecting Trip; Bell's Vireo; Black Tern; Yellow-rumped Warbler; An Automatic Blower; Flight of Ducks; White-eyed or Florida Towhee; Pygmy Owl; Cooper's Hawk; 10 short articles. Sept., '89.
- No. 48.—Winter Birds of Kalamazoo County, Mich. (2½ pages); American Long-eared Owl; Wood Ibis in Illinois; Birds of Bertie Co., N. C.; Collecting in Western Florida; A White Sparrow; Nests and Eggs of North American Birds; Black Tern; 8 short articles.
- No. 49.—Thick-billed Grebe; Birds' Nests; Yellow-billed Cuckoo; Mechanical Egg Drill; Birds Moving their eggs; Cardinal Grosbeak; To Pack Eggs for Transportation; Disposal of Duplicate Specimens; Complete List of the Birds of North America arranged according to the A. O. U. Check-List (6 pages); 5 short articles. Nov., '89.
- No. 50.—Birds of Niagara County, N. Y.; Shore Lark; Incidents in Bird Life; Gleanings from our Correspondence; Marsh Hawk; Yellow-headed Blackbird; Northern Phalarope; 12 short articles. Dec., '89.
- VOLUME VII.
- No. 51.—Title pages for binding, with Complete and Exhaustive Index of Volume VI.; Notes on Florida Birds (3 pages); Ornithology and Bicycling; Audubon Ornithological Club; Florida Field Notes; Trip to Devil's Glen; Simple Contrivance; Capture of a Trumpeter Swan; 4 short articles. Jan., '90.
- No. 52.—Breeding of the Brown-headed Nuthatch

hatch; Prairie Horned Lark; Collecting Experience; Snowy Owl; Nest of the Texan Bobwhite; Unusual Nesting of the Downy Woodpecker; Evening Grosbeak; Blue-Gray Gnatcatcher and Tufted Tit; 6 short articles. Feb.

No. 53.—Summer Residents of Buena Vista County, Iowa; In the Woods of Florida; Birds of Mackinac Island, Mich.; Among the Gulls on Isle Royale; Sandhill Crane; Evening Grosbeak; Ruby-crowned Kinglet; Cactus Wren; Screech Owl in Captivity; Talking Birds' Nests; 11 short articles. March, '90.

No. 54.—Caged Eagles; Evening Grosbeak (2 pages); Solitary Sandpiper; Summer Redbird; Notes from Rochester, Mich.; Family *Rallidae* in Minnesota; Downy Woodpecker; Hardly Ornithological; 10 short articles. Apr.

No. 55.—Do Birds Mate More than Once?: Habits of the Evening Grosbeak; Pileated Woodpecker in Florida; Bird Protection, Chinese or Mongolian Pheasant in Oregon; Prairie Warbler; Winter Birds in Spring; A Valuable Work: Davie's New Work on Taxidermy; 12 short articles. May, '90.

No. 56.—Nesting habits of the American Oystercatcher; Prairie Horned Lark; Saw-Whet or Acadian Owl; Pine Warbler; Bluebird; Abbinos; Pileated Woodpecker in Mahoning County, Ohio; Belligerent Neighbors. Recording the number of Birds Observed; Book Review; Prospectus of the Worcester Natural History Camp (4½ pages); 12 short articles. June.

No. 57.—American Crossbill; Crested Grebe; Voracious Mountain Trout; Yellow-billed Cuckoo; Long-tailed Chickadee; Rough-winged Swallow; Great Horned Owl; Some Unusual Happenings; Pallas' Cormorant; Eggs of Audubon's Warbler; 12 short articles.

No. 58.—The *Caprimulgus* in Arkansas: White-bellied Nuthatch; Strange Co-habitation; Variation in the Eggs of *Habia ludoviciana*; King Rail in Minnesota; 8 short articles. Aug., '90.

No. 59.—The Use of the Camera in the Field; Saw-Whet or Acadian Owl; Nesting of the Black Snowbird; Marsh Hawk; Plain Titmouse; Lost Opportunities; The Magnolia Warbler; Wilson's Plover at Home; 8 short articles. Sept., '90.

No. 60.—The Use of the Camera in the Field. A study of nests (6½ pages, illustrated with 4 photo engravings); The Flathead (Montana) Field; The Owls of San Bernardino Valley; A Collecting Adventure. The Ruby-throated Hummingbird; Ornithologists at Indianapolis; The Burrowing Owl; After "Gators' Eggs"; Notes from Northern Minnesota. Oct., '90.

No. 61.—The Ruby-throated Hummingbird (Fairies in a Fairyland) (3½ pages); Notes from Travis Co., Texas; A Week to Mt. Hamilton; Great Horned Owl; Strange Co-habitation; Brewer's Blackbird; Nesting of (*Onotopis borealis* in Maine; A Letter from Oliver Davie Relating to his New Work on Taxidermy; Notes on *Ardea herodias*; The Prothonotary Warbler; Nesting of the Virginia Rail; The Yellow Rail in Mich.; An Outline of the More Valuable Articles Appearing in the YOUNG OÖLOGIST (3 pages); 7 short articles. Nov., '90.

No. 62.—The Rusty Blackbird; Notes from Ohio; Evening Grosbeak in New Hampshire; The Cala, Partridge or Valley Quail; Nothing at All—a Poem; Case for Instruments; Notes from Island Lake, Florida; 3 short articles. Dec., '90.

VOLUME VIII. No. 63 contains 24 pages. No. 64, 32 pages. No. 66-67, 36 pages including cover. The balance, 20 pages, including covers No. 74 also contains an additional 4 page inset.

No. 63.—A Day Among the Fish Hawks: The Marsh Wrens of Hudson Co., N. J.; Now.—The Time to Wage War on the English Sparrow; Nesting of the Downy Woodpecker in Kalamazoo Co., Mich.; American Sparrow Hawk; Anna's Hummingbird; Was it a Cowbird's nest; Florida Red-shouldered Hawk; On Owl's Tenacity to Life; Western Horned Owl; Albino Eggs; An Afternoon with the Birds: A "Good Enough" Way to Blow Egg; Meeting of the A. O. U.; Expert Taxidermy; 5 short articles. Jan., '91.

No. 64.—Flycatcher Notes; Collecting in the Marsh; House Finch; The Barred Owl; Yellow-breasted Chat; Anna's Hummingbird; Birds North of Their Usual Range; Egg Collecting—The Two Classes; A Perfect Collecting; Texas Notes; Nesting of *Spinus pinus* in the Northwest. Title pages for binding with complete and exhaustive index for Vol. vii. 4 short articles. Feb., '91.

No. 65.—A New Year's Soliloquy; Water Ouzel; An Ornithological Paradise; "The English Sparrow Must Go"; Fond Mothers; Passenger Pigeon; The Oölogist; Caracara or Mexican Eagle; The Cooper's Hawk; Some Early Birds of Linn Co., Oregon; Broad-winged Hawk; The Extinction of Our Birds. March, '91.

No. 66-67.—Combined Number.—A List of the Birds of Elgin Co., Ont.—(6½ pages); Random Notes on the Belted King-fisher; The English Sparrow! A Few Articles for the Collector; Screech Owl; Western Meadow Lark; Hermit Thrush; *Aves urbis*. A Much Occupied Nest! The Whip-poor-will; Nesting of the Red-tailed Hawk; Cooper's Hawk; The Eagles of North America; Nesting of the Black-capped Chickadee in Kalamazoo Co., Mich.; Nesting of the Purple Finch; The Red-eyed Vireo; Bird Life of an Islet; Migration of the Canada Goose; Association of American Ornithologists; Notes on the Wright's Flycatcher; 3 short articles. Apr. and May '91.

No. 68.—The Hummingbirds of California; Ring Pheasant; The Carolina Wren; American Dipper; A Trip to Pelican Island; Michigan Ornithology: A Duty to Perform; Great Horned Owl; Enemies of Our Feathered Friends; Queer Neighbors; Bird Migration. June '91.

No. 69.—Some Florida Notes: The New Era in Ornithology; The Amusing Antics of a Pair of Brown Thrashers; The Chewink in Orleans County; The Yellow-billed and Black-billed Cuckoos; Changes in Michigan Ornithology; My First Nighthawk's Nest; The Wrens of North Carolina; What causes the Quick Notes of the Whip-poor-will; A Better Report from Texas; Items of Interest from Florida; The American Osprey; Nesting of the Chestnut-backed Chickadee. July, '91.

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No. 71.—The Black and White Creeping Warbler; An Indiana Heron; The English sparrow in Bay City, Mich.; Michigan Notes; Gambel's White-crowned Sparrow; A Rap-

- bling Mixture from Connecticut: Henslows Sparrow: A Few Notes on Ornithology and Ornithologists: The Ruby-throated Hummingbird: Of Interest to Oologists: How I Found a Killdeer's Nest: Range of the Towhee: Owls as Pets: Michigan Notes: A Rose-breasted Grosbeak Widower: 5 short arts. Sept. '91.
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- No. 73.—The Great Carolina Wren: A Timely Letter: Western Robin: Western New York Naturalist's Association: The Scissor-tailed Flycatcher: California Thrasher: Ornithologist Association: Albino Birds: Chewink or "Chewee": "Our Birds in Their Haunts": The Lark Bunting: List of Birds Found Breeding in the Vicinity of Peoria Ills: World's Fair Notes: Relics by the Wagon Load. Nov. '91
- No. 74.—The Sharp-shinned Hawk: A White Crow: The Pileated Woodpecker: Russet-backed Thrush: How Dr. M. Keeps His Oological Treasures: Thanksgiving Notes from the Far West: The Blue-gray Gnat-catcher in Arkansas: Shall We Organize: Bird Nesting in November: Frauds: A Further Contribution to the Chewink Controversy: One Day's Tramp: The Nest of the Chestnut-sided Warbler: The Gulls: The Carolina Parrot: Barrtram's Sandpiper: The Horned Grebe: World's Fair Notes. This number also contains a 4-page inset of Nuttall's Ornithology. Dec. '91.
- VOLUME IX.
- No. 75—Bird Nesting in North-west Canada: Two Birds of Western Kansas: Ornithologists Association: Western New York Naturalists Association: The Blue Grosbeak: Maryland Yellow-throat: Chewink: The Bronzed Grackle. Prizes for Best Articles: Are Nesting Cavities Occupied More than Once: Old Recollections: Summer Tanager: "The Way of the Transgressor is Hard": "Our Birds in Their Haunts." 5 short articles. This No. also contains a plate in two colors of Long Lake and Nests of Canvas-back and Yellow-headed Blackbird. Jan. '92.
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- No. 77 A Pair of Screech Owls at Home (an engraved Frontispiece) Zootomy—The Domestic Pigeon: Incessancy of the Yellow Warbler's Song: Some of Our Thrushes: The Specimens I Didn't Get: Notes from South-western Ohio: A Day with the Ducks: A Trip Through "Wa-hoo Hammock": A True Naturalist: The Crow: Around Omaha: Early Nesting of the Great Horned Owl: A Trait of the Carolina Wren: Visiting a Bald Eagle's Nest in Virginia: The Vireos of Connecticut: The Crossbill in Iowa: Notes from the Virginia Coast: An Hour with the Water Birds: Half-a-dozen short articles, notes, etc. March '92.
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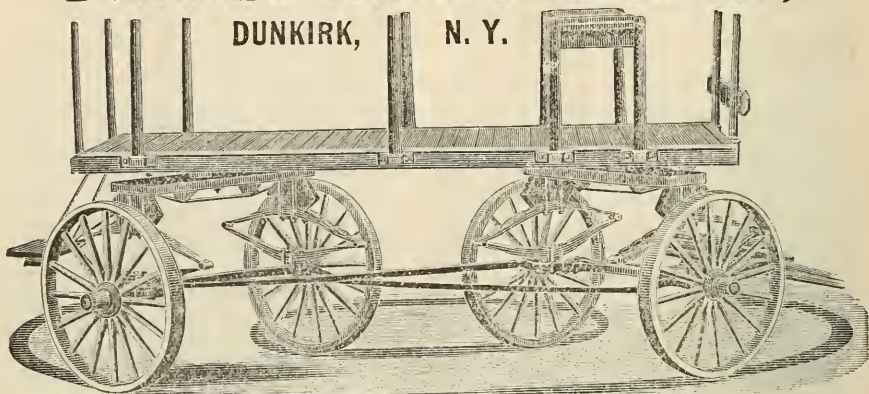
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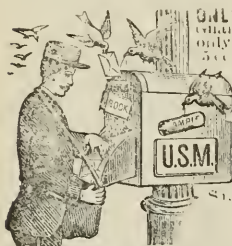
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EXCHANGE NOTICE.—Good Watch, cost \$15; also cancelled Columbian stamps for Coues' Key, revised edition or best offer in skins or eggs with data. C. H. EVANS, Townshend, Vt.

STAMPS.—25 varieties 6c., 50 varieties 10c., 200 assorted 10c., 500 finely assorted 25c., 15 *unused* varieties including Spain, Switzerland, Heligoland, Italy, Bavaria, Cuba, Philippine Islands, etc. 25c. ROWARD M. GILLET, Lebanon Springs, N. Y.

I HAVE Birds Skins Mammal Skins, Mounted Deer Heads, Bison Heads, flint arrows and old flint lock pistols, live Hawks, Owls, Foxes, Coons, Porcupine and other specimens to exchange or sell. C. F. FITE, Denver, Ind.

TO EXCHANGE.—Birds in the meat this winter. Parties who are interested please write. No cards. CHARLES BARBER, La Porte, Ind.

TO EXCHANGE.—400 varieties foreign stamps in International Album, for New England bird skins or good book on Ornithology. R. M. MANDELL, Washington St., Newton, Mass.

SHOES.—W. L. Douglas \$3 and \$4 shoes. Any size. Best Shoes in the world for collectors. Make offers of Eggs and Sets. All letters answered. DELBERT S. MUSSER, Anderson, Ind.

TO EXCHANGE.—Birds eggs, 32 cal. Rifle and Stylographic Pen for a good Camera. All communications answered. GEO. GRAHAM, P. O. Drawer C., Gainesville, Fla.

STAMPS.—To exchange for eggs, naturalists periodicals, etc. Send your list and get mine. KERR & PERHAM, Sandwich, Ill.

As an advertising medium, I think the Oölogist unsurpassed, and as a magazine, invaluable to the collector. I have received not less than 100 answers to my exchange notices and have had satisfaction in every respect. E. R. Scongle, Ft. Worth, Tex.

TO EXCHANGE.—2800 old U. S. adhesive and envelope stamps worth over \$35, for Eggs in singles, send your lists and receive mine. FRANK H. LORD, Saranac, Ionia Co., Mich.

CAMERA. Roll of Films, World's Fair Photographs and Cash to exchange for Printing Press, Views, Specimens, Skins, Eggs or offers. WILL D. WOOD, Burlington, Mich.

WANTED. Good clean stamps from Barbados, Brunswick, Mauritius, Newfoundland, Nova Scotia, Uruguay, etc. Will give stamps in exchange. HOWARD M. GILLET, Lebanon Springs, N. Y.

VICK'S FLORAL GUIDE, 1894.—It contains descriptions that describe, not mislead; illustrations that instruct, not exaggerate. This year it comes to us in a suit of gold. Printed in eight different colors besides black. Colored plates of Chrysanthemums, Poppies and Vegetables. On the front cover is a very exquisite bunch of Vick's New White Branching Aster and on the back is the New Double Anemone; 112 pages filled with many new novelties of value as well as all the old leading varieties of flowers and vegetables. We advise our friends who intend doing anything in the garden this year to consult Vick before starting operations. Send 10 cents to James Vick's Sons, Rochester N. Y., for Vick's Guide, it costs nothing, as you can deduct the 10 cents from first order. It certainly will pay you.

WANTED.—To exchange, a 25 cal Steven's rifle, with globe and peep sights, in fine condition for a Marlin 32, or for cash. L. A. BEHRENS, Ivoryton, Conn.

I HAVE South-western eggs in sets with data for sale very cheap. Parties meaning business write me. I want a copy of "Ridge-way's Nomenclature of Colors," will give eggs for it. H. SAYLES, JR., Abilene, Tex.

From having my name placed in your columns for a short time I received so many letters and cards, asking for my list of eggs, that it took all my spare time to answer them. I was greatly repaid for so small an outlay. O. E. Crooker, Madison, Wis.

FOR every first class set eggs with data, sent me will send twice its value in stamps at Scott's prices. Rarer the eggs, rarer the stamps. H. C. HIGGINS, Cincinnati, N. Y.

I HAVE numbers 13-52, Vol. ix, Vol. x, 1-12, Vol. xi, of the Golden Days, to exchange for books on Ornithology or Oology. H. II, JOHNSON, Pittsfield, Maine.

TO EXCHANGE.—Law on Promissory Notes by Story, in good condition, original cost \$5.50, for best offer in first-class sets. FERD. F. BALL, Sterling, Kansas.

NOTICE.—I will pay the following for cancelled Columbian stamps, 1 and 2 cent envelopes 25 cts. per hundred (square cut); 3, 4, 5 and 10 cts., 50 cts. per hundred; 6 and 8 cts. Col. 2 cts. each; 15 ct. Col. 4 cts. each; 30 ct. Col. 5 cts. each. CHAS. G. COLLINS, Box 431, Garden City, Kas.

Through a single exchange notice in the Oölogist I exchanged \$50 worth of eggs, thereby adding 75 sets to my collection, and corresponding with collectors in 15 different states and in Canada. Always ready for a good word for the Oölogist. W. I. Comstock, Norwalk, Ct.

FOR EXCHANGE.—A Frank Wesson 41 cal. rifle and some U. S. and foreign coins to exchange for Eggs in sets with data. GEORGE P. ROWELL, 95 Atlantic St., Stamford, Ct.

TO EXCHANGE.—Sketching camera or card printing press for best offer in climbing irons (strapped), eggs, books, oölogist instruments, etc. Write at once. F. R. WENGER, Concord, Illinois.

EXCHANGE NOTICE.—A 22 cal. Remington Rifle, cost \$8.50; good as new, for Coues' Key or cash. F. A. COLBY, Beatrice, Neb.

TO EXCHANGE.—A 12 ga. double barreled breech loading shot gun, for stamps; and 550 different stamps for eggs or trays. BERYL. HODGE, Sterling, Kans.

My notice has paid me wonderfully. E. R. N. Murphy, Augusta, Ga.

TO EXCHANGE.—Wood carving tools, novels, magazines, cigarette pictures and single eggs for first-class eggs in sets and rare stamps. CHAS. L. BARTLETT, 331 S. West St., Galesburg, Ills.

\$1.00 to \$300, of crystalized and other fossils, to exchange for skins, coins, eggs, stamps, curios, Indian relics, insects, etc. GUY CONLEY, 1400 Colorado St., Austin, Tex.

When answering advertisements, always mention the "OÖLOGIST."

THE NATURALIST is a large 16-page monthly magazine devoted to oology, geology, archaeology and all branches of natural history. Only 50 cents per year. Free exchange column. Sample copy free. HERBERT STERZING, Austin, Texas.

SHOT-GUN FOR SALE!—Single barrel breech-loader in fine order. Twist barrel and top action. A fine shooter and cost \$12. For particulars write quick. Singles to exchange for sets. HERBERT GREENE, Montclair, N. J.

TO EXCHANGE.—An accordeon, complete scroll saw outfit, \$3 target pistol and skate— for cash. Wanted dumb bells. Would like eggs in sets, curios, for Waterbury watch, chain, charm, old revolver and old papers and magazines. FRED ROBERTS, Postville, Iowa.

FOR EXCHANGE.—Zoological report, Texas to the Pacific, by Baird, Giraud and Heermann. 200 plates—many colored plates of birds. Also eggs with Foreign and American collectors. A. E. PRICE, Grant Park, Ill.

NOTICE.—What have you to offer for some live California Quail in healthy condition in singles or pairs. Can be shipped very light. OTTO J. ZAHN, 427 So. Hope St., Los Angeles, Cal.

SECRET POWER.—The divine in man. Hypnotism is the key which unlocks the secret of its development and use. "How to Win!" Price \$2. Send \$1 with order and agree to pay balance upon receipt of book. Circulars free. Address PROF. ANDERSON, Masonic Temple, Chicago.

I have had exchanges in your paper and have been greatly pleased with them. I have added nearly \$100 worth of eggs to my collection and am yet exchanging. Had I more specimens I could easily have disposed of them. To say I was pleased expresses it lightly. R. A. Campbell, Hanover, N. H.

FOR EXCHANGE.—Pair lady's roller skates, minerals, invisible and sympathetic inks to exchange for best offer in eggs. HARRY KEILHOLTZ, Rising Sun, Cecil Co., Maryland.

WANTED.—All values Columbians; 1890 issue, 3c. up; Southern fresh water shells and fossils for fossils, shells and marine specimens. D. H. EATON, Woburn, Mass.

FOR EXCHANGE:—\$25.00 in scientific books, magazine and common eggs (sets and singles) for Coues' Key or Ridgway's Manual, single breech-loading shot gun and field glass. Send description and get list. All answered. STEPHEN J. ADAMS, Cornish, Maine.

I received not less than fifty answers to my advertisement and have made exchanges from all parts of the U. S. W. L. Ft. Collins, Colo.

WANTED!—A printing press, chase 6x8, type and printing material. I have for exchange for the above 1000 rare Chinese coins that are over 500 years old, rare and desirable first-class birds eggs, minerals, shells and other valuable curiosities. Write stating what you have and I will make you a good offer. Address C. M. HATFIELD, Oakland, Cal.

\$15 WORTH of 5, 10 and 25 cts. specimens of minerals, Indian relics, shells, and fossils to exchange for best offer of fine minerals (large) and petrified woods, or Indian relics. Specimens are good but duplicates of what I have in my collection. A few large fine fossil shells wanted. GEO. W. DIXON, Watertown, S. D.

TO EXCHANGE for 1st class single eggs, Wood's Natural History, 4-keyed flute, nearly new, skin of black woodchuck, rare. All answered. ERNEST H. SHORT, Chili, N. Y.

WANTED:—Vol. I of the *Audubon Magazine*. Will give cash or good exchange. Also have eggs to exchange for first class bird skins. R. C. MCGREGOR, Palo Alto, California.

I receive more mail in one day from advs. in the OÖLOGIST than from all the rest put together and I shall continue to advertise in it. C. W. Hillman, Canisteo, N. Y.

I HAVE first-class climbing irons strapped complete for \$2.00, first-class drills for \$.50 a doz., or I will exchange for Indian relics, sets or curios. CLARENCE H. WATROUS, Chester, Middlesex Co., Conn.

EGGS IN SETS:—During the coming season I will collect *fine, positively identified* sets of this locality. Those wishing to exchange *fine* sets for same please write. HORACE A. GAYLORD, Pasadena, Cal.

TO EXCHANGE: A fine colored plate (22x 25 inches) of Prairie Chickens and Duck (life size) supposed to be hanging by feet from a peg for \$2.00 worth of eggs in sets. Send list of what you have. PERCY D. GETTY, 301 N. Main St., Bloomington, Ill.

Judging from the success of an advertisement which I had inserted in the July number I desire to say, that I received replies from all parts of the country, from Maine to California, and succeeded in making many valuable exchanges. An advertisement inserted in the OÖLOGIST will accomplish all that can be expected. D. B. Burrows, Lacon, Ill.

COINS WANTED:—Foreign and U. S. silver or copper. Must be in good condition. Especially desire U. S. half cents and large U. S. cents to complete series. Have to offer thirty large cents, half dimes, old half dollar, etc. Will buy at reasonable rates. D. B. ROGERS, Wa-Keeney, Trego Co., Kan.

READ THIS:—Every person sending me an U. S. cent dated before 1859 or a half dime or a dime dated before 1874 I will send 25c worth of fine foreign stamps, valued at 2 to 10 cents each, for each coin. First person sending will receive \$1.00 worth of stamps *free*. Send quick. Rare coins bought for cash. Send list. Also taxidermist tools for sale cheap, for cash. W. A. JOHNSON, 123 W. Brooks St., Galesburg, Ill.

I received so many letters and cards from my exchange notice in the OÖLOGIST, that I could not answer them all. In order that you may judge of the number of letters received, I would say, that I covered a chair completely with the stamps taken from the letters thus received. L. V. Case, Naples, N. Y.

TO EXCHANGE for eggs in sets, the following sets with data. A. O. U. Nos. 488 1-5, 755 1-4, 540 1-3, 506 1-2, 498 1-2, 106 10-1, 412 1-5, 581d 1-2, 704 1-4, 477 1-4, 444 1-3, 761 1-3, 721 1-6, 30a 1-1, 622a 1-3, 519 1-3, also Singles Nos. 560, 604, 624, 511, 211, 212, 622a, 721, 766, 378, 200, 70, 506, 74, 199, 300, 378, 581, 687, also lot of foreign and U. S. stamps in album, catalogue value \$18.00, and a card printing press with four fonts of type. All letters answered. CHARLES A. ELY, Perrineville, Monmouth Co., N. J.

When answering advertisements, always mention the "OÖLOGIST."

TO EXCHANGE.—Winchester Repeating Rifle 22 cal. nearly new, for southern or western sets. H. H. SPICER, 596 Woodward Ave., Detroit, Mich.

FOR EXCHANGE.—First-class common sets of this locality, with data, for same, with collectors in other states. Address, WM. L. ATKINSON, San Jose, Cal.

I received almost 100 answers to my ad. in your paper. It is the best advertising medium I ever used. G. B. BENNETT, Terra Haute, Ind.

TO EXCHANGE. Very desirable first-class sets and singles with datas, of this community, for first-class Western and Southern eggs. CHARLES WARNER, Mackinaw, Ill.

TO EXCHANGE.—Fine eggs in sets and singles, skins, stamps and books. JOHN W. HITT, 169 Broadway, Indianapolis, Ind.

EXCHANGE.—52 in. Columbian Light Roadster Bicycle in fine running order for best offer in books, fire arms or skins. All letters answered. Cash value of wheel is \$25. HORACE H. FELL, 3658 Dearborn St. Chicago, Ill.

WANTED.—Collectors of Insects in every State of the Union. See my "ad." PROF. CARL BRAUN, Naturalist Bangor, Me.

One advertisement of Coleoptera brought me six letters of inquiry. In three weeks, closed out the last I had, and have to answer letters still coming in "Specimens all gone." F. Hodge, Hudson, O.

WANTED.—An egg cabinet, a set of No. 349 and books on ornithology. I offer a solid silver hunting case watch, sets of Nos. 325 1-2, 352 2-2, 417 1-2 and part cash on the cabinet. WM. H. BELL, West Point, Va.

TO EXCHANGE.—Two good egg drills or 150 postage stamps for every set of birds eggs with data sent me. Address, CLARENCE LUTHER, P. O. Box 322, Fayetteville, Ark.

MOUNTED BIRDS, Skins, Eggs and other specimens exchanged for Printing Press, Type, "Hornaday's Taxidermy," Collecting Tube, Lathe or Skins. DELBERT MEIXSELL, Pekin, Illinois.

OÖLOGISTS WANTED.—Vol. 5, Nos. 1 to 6 and 10 to 12. Papers and book for above, and for many other papers. R. H. ROCKWOOD, Waterville, Maine.

TO EXCHANGE.—Nicely mounted Birds for best offers of eggs in sets; Hawks, Grouse and Quail preferred. I have Barred, Horned, Snowy and Screech Owls; Goshawk, Broad-winged, Sharp-shinned and Cooper's Hawks; Peacock; White Pelican; Blue Herons; etc. CHAS. K. REED, No. 262 Main St., Worcester, Mass.

The results obtained from my recent exchange notices in the Oölogist have been entirely satisfactory. I have received more than a hundred communications, embracing nearly every section in the Union from Maine to Florida and from the Atlantic to the Pacific. I know of no other paper as an advertising medium in which such results could be obtained at such small cost. M. C. White, Mathews, C. H., Va.

FOR SALE OR EXCHANGE.—Second-hand self-inking Excelsior Press, 5x8, with four founts of type, furniture, ink, etc. Price complete \$15.00 or open for offers of exchange. ALBION CARD WORKS, Albion, N. Y.

TO EXCHANGE. 1st class eggs of Flycatcher, Terns, Sandpipers, Chickadees, for common sets with data. E. F. WATSON, Kennebunk Beach, Me.

TO EXCHANGE FOR FIRST-CLASS skins, have. 30 No's Santa Claus, Parley's Universal History, Three Kingdoms, roller skates, accordion, Quackenbush's air rifle. L. G. WOODRUFF, 202 W. 103 St., N. Y. City.

WANTED.—A good 5x7 or 5x8 Landscape Camera of reliable make. Also eggs in sets of American Raptors. Have many things to offer for same. Write at once to A. MOWBRAY SEMPLE, Poynette, Wis.

My notice in the August number of the Oölogist paid me big. I received over 30 letters in three days. J. M. SWAIN, E. Wilton, Me.

WOULD LIKE to correspond with reliable California or Southern collectors who would like to exchange eggs of their locality for others of this. C. C. HENRY, 340 Broadway, New York City.

ONE ALMOST new self-inking printing press just the thing for printing labels, etc. will sell for \$3.00. GLOVER M. ALLEN, 3 Vernon St., Newton, Mass.

FOR EXCHANGE.—Merwin and Hulbert interchangeable sixteen ga. shot gun and 22 rifle, cost fifteen dollars, for eggs or oölogical supplies. CARLTON H. PLUMB, 1351 Washington Ave., Springfield, Mo.

THE MAN THAT WON AT MADISON SQUARE IN '93, bred the Brown Leghorns I am breeding. My Claiborne Pits are winners. I will exchange eggs of either for books. J. S. GRIFFING, Cutchogue, Long Island, N. Y.

CORRESPONDENCE invited from all desiring to exchange eggs with full data, of other localities for same of Central Iowa during the coming season. A. P. GODLEY, LeGrand, Ia.

As an exchange medium it can't be excelled. Every exchange notice I have had inserted, has brought me from thirty to seventy-five answers. In fact more than I could possibly attend to. F. T. CORLESS, Tillamook, Ore.

We received 150 letters and cards in answer to a single notice in the columns of the Oölogist. Merrimac Stamp Co., Natick, Mass.

ETHNOLOGY.—Wanted a copy of J. W. Powell's First Annual Report, 1879-80 of the Bureau of Ethnology. Must be "as good as new." Address stating lowest cash or exchange price. F. H. LATTIN & CO., Albion, N. Y.

EGGS.—Eagle, Buzzard, Hawk, Osprey, Rare Warblers and nests and many others. Fine mounted birds, cheap, cash. Only perfectly safe climbing gear, adjustable to any size tree, stop anywhere to rest, hands free. Get from M. C. White, sole manufacturer, Mathews, Va. \$2 net. Fine photos, 8x10 of old Chancellorsville Headquarters, Gen. Hooker during battle May, 1863, 30c. Cabinet photo, Steven Junior Steptoe (colored man) and his cabin. Taken from life, 1893, in 109th year of his age, with interesting history, 25c. Both above for 50c. New style climbing irons with steady stays, strapped, not least tiresome, \$2.75 net. All information for stamp. F. THEO. MILLER, Lancaster, C. H., Va.

When answering advertisements always mention the "OÖLOGIST."

WANTED AT ONCE.—I can use a number of 22 cal. Colt and Smith & Wesson revolvers. Will pay cash or good exchange in 32 cal. Bull-dog revolvers. State cash price and condition. HORACE H. FELL, 3558 Dearborn St., Chicago, Ill.

BIRDS, MICHIGAN: Birds, Minnesota; Mammals, Minnesota; Fish, Lorain Co., Ohio; Dave's Nest and Eggs, Gentry's Illustrations—Middle States, Part I, and various other papers, Nests and Eggs, etc., to exchange for books on Ornithology or Mammalogy. WM. H. FISHER, 14 W. North Ave., Baltimore, Md.

I am well satisfied with the results of my advertising in the OOLOGIST and shall certainly continue to patronize it as long as I have material to dispose of. W. G. SMITH, Loveland, Colo.

RAND & McNALLY Atlas of the World (new) \$4.; New Rogers' Scroll Saw, \$2.; Vol. 12-16 O. and O. \$2.; 4 Steel Traps @ 10c., for Cones' Key (fine cond.) or snare drum, 14 in. head, key tight, good condition. Enclose stamp, GEO. W. VOSBURG, Nat., Columbus, Wis.

FOR SALE:—Some (Catlin's) Pipestone Peace-Pipes \$2.00 each, inlaid Paper Weights \$1.00, Button Hooks stone handles \$1.40, Watch Charms \$1.25, polished pieces pipestone \$1.25 to \$1.50 postpaid. A. D. BROWN, Pipestone, Minn.

EXCHANGE NOTICE:—\$5 cash takes 4x5 tripod camera and outfit, Waterbury lens, cost \$10. For particulars address A. B. BLAKEMORE, 280 St. Andrew St., New Orleans, La.

WANTED:—A good collecting pistol, also the following A. O. U. numbers of eggs in sets with data 47, 332, 337, 339. D. A. ATKINSON, Box 44, Wilkinsburg, Pa.

FOR SALE:—Gilman Vertical Press, with fountain, chase 6x9, 50 lbs. long primer and 16 fonts job type, some new, balance nearly new, leads, cases, stick, etc., \$40 cash, LOVETT BROS., Oxford, Mass.

I WISH to correspond with advanced students of Evolution, Primitive Man, Ornithology and Oology. References exchanged. Correspondents in foreign countries especially desired. Correspondence *en la langue Française*. HARRY B. SARGEANT, 2194 Seventh Ave., New York, New York.

FOR SALE OR EXCHANGE CHEAP:—Cigarette and tobacco pictures, tickets and tobacco tags, birds in the meat, 20 gauge collecting gun books, etc. MAKE OFFERS. WM. GILBERT, Box 130, Elk River, Minn.

WANTED, a clean copy of the *O. Nidiotogist*. Will give the following first-class singles, 495, 687, 735, 756. C. H. MORRELL, Pittsfield, Me.

WANTED!—Reliable and competent collectors to collect for me this season. Southern, western and northern eggs wanted. W. E. LOUCKS, Peoria, Ill.

WONDERS of the Sea, containing descriptions of the many wonderful and beautiful things found at the bottom of the ocean fully illustrated. This work and the Journal 3 mos. for 10c. JOURNAL, Beaver Springs, Pa.

I received 10 times as many answers to that one little exchange in June OOLOGIST than I did in all of several other exchange ads. I ventured in other papers, which cost me over \$10. Ed Van Winkle, Van's Harbor, Michigan.

I HAVE two fine old U. S. army sabres to exchange for Instantaneous Camera, Typewriter, Field Glass or offers. I also have Oological Instruments to exchange for eggs. Write at once. ISADOR L. TROSTLER, #246 Farnam St., Omaha, Neb.

I HAVE first-class sets with data of Water Birds, Hawks, Owls, etc. for sale very cheap. Parties desiring eggs address H. SAYLES, JR., Abilene, Texas.

The advertisements inserted in your paper have proven entirely satisfactory. We consider an inch in the OOLOGIST better than a page in any other naturalists paper published. H. E. PENDRY, Eustis, Fla.

BIRDS EGGS taken at half price in exchange for fine rubber stamps. Illustrated catalogue for stamp. Correspondence solicited. ARTHUR L. POPE, McMinnville, Ore.

2 VOLS. YOUTHS Companion and 1 of Golden Days for books on Oology or best offer in eggs. C. Y. SEMPLE, care of Atlantic Refining Co., Easton, Pa.

WANTED:—Microscopical apparatus, books, postage stamps (Columbians especially desired) and envelopes. Have books and specimens of all departments Natural History, stamps and curiosities of all kinds, value over \$5,000.00. Wanted particularly first class microscope. G. R. LUMSDEN, Greenville, Conn.

The OOLOGIST is an excellent medium for advertising. From my 75 word exchange notice in the OOLOGIST I have exchanged over \$250 worth of eggs, adding about 75 sets to my private collection. W. C. LAWRENCE, Los Gatos, Cal.

UNCLE TOM'S CABIN has sold for \$2. We send it complete, 192 pages, and Journal 3 mos. for 10c. JOURNAL, Beaver Springs, Pa.

FOR SALE:—Fine Oriskany sandstone fossils by express 3 dollars per 100, smaller lots same rate, shale rock fossils from Cayuga Co. very cheap, arrow points, spear heads, scrapers, net sinkers, cheapest in market. Will exchange for spear heads and arrow points from Michigan and Wisconsin. JOHN MINCHIN, Fleming, Cayuga Co., N. Y.

EGYPT EXPLORATION FUND.—This society is engaged in discovering and recording the arts and sciences, the social and family life, the business and civic occupations of men, their knowledge of jurisprudence and medicine, their religious beliefs and practices, for 5,000 years from the dawn of history. Explorations this year are in progress at Deir-el-Bahari (Thebes), and the "Archaeological Survey" is occupied at Tell-el-Amarna. For full particulars, address with stamp. REV. DR. WILLIAM C. WINSLOW, 525 Beacon St., Boston, Mass.

YOUR NAME IN GOLD INK on 25 stylish visiting cards and a useful present free for only 10 cents. JOURNAL, Beaver Springs, Pa.

From my exchange notices, I received so many letters, etc., it was impossible to answer them, contrary to my word. From my add in June number I received almost a bag of mail daily. J. LILL, Edinburg, Ill.

I have not kept a record of my answers but can say that I am satisfied that it paid well. H. A. CARHART, Syracuse, N. Y.

When answering advertisements always mention the "OOLOGIST."

PECK'S BAD BOY, Illustrated, and the Journal, 3 mos. for only 10c. Funniest story out. JOURNAL. Beaver Springs, Pa.

From my single notice I received over 100 answers and am still receiving them. I advise all to advertise in the Oölogist. N. V. LUDEN, Lake City, Fla.

OREGON EGGS:—Those desiring to purchase, this season, fine authentic sets of Oregon eggs will do well to send a 2c. stamp for my price list. Correspondence solicited. ARTHUR L. POPE, McMinnville, Ore.

FOR EXCHANGE:—A fine B flat cornet, cost \$40, no cheap affair. Wanted, birds eggs, Indian relics, rareties, curios. Also have fine escallop shells for exchange. A. E. PAYNE, Box 218, Greenport, I. L., N. Y.

PHOTOGRAPHS of Wild Game, consisting of eighteen different 5x8 photographs of deer, six of antelope, five of elk, one coyote, two mountain lions; \$3 a dozen mounted, \$2.50 unmounted. A. G. WALLIHAN, Lay, Routt Co., Colo.

A "SNAP" FOR YOU:—My entire collection of eggs and mounted birds must go before May 1st and for Indian relics or such articles as I can use, I will give \$2 worth of birds and eggs for each \$1 worth sent. References given and required. L. V. CASE, Naples, N. Y.

All Exchange notices that I have had in the Oölogist have proved very satisfactory. I consider that the exchange department affords the best medium of negotiating exchanges of any monthly of like nature. F. W. C., Wauwautosa, Wis.

It gives me great pleasure to acknowledge the success of advertising in the Oölogist. I have advertised in several Natural History papers but in no case have I received that prompt reply with success as through the medium of the Oölogist. Carl Braun, Bangor, Me.

NATURAL and Other Wonders of the World, containing descriptions and illustrations of some of the most wonderful works of nature and of men. Free with Journal 3 mos. on trial for 10c. JOURNAL. Beaver Springs, Pa.

JUST WHAT YOU WANT!—A perfect hold-back for your buggy or wagon, sure to please, simple, cheap, lasting. Send 25c. for sample pair, or stamp for description. Will exchange fine specimens of Georgia woods also telea, promethea and ceroplia cocoons for eggs, Oölogists, stamps, etc. LEROY KING, 304 Forest West, Detroit, Mich.

I WILL GIVE one good U. S. half cent or four large copper cents for each used 90ct. or twelve 15c. and 30c. 1890 stamps. Or for twelve 6c. and 8c. or twenty 3c. or four 15c. or two 30c. or one 50c. Columbians. Good exchange in other coins or foreign stamps for all kinds of U. S. postage and revenue stamps. Or will pay cash for lots or collections. Price list free. J. A. PIERCE, 191 Clark St., Chicago, Ill.

BARGAINS.—Large Peacock, tail spread, good fire screen, 10 feet across, \$35. Another specimen mounted on pedestal, natural position, cheap at \$25. Mounted "Great Blue Heron" \$5. Stuffed Porcupine Fish, a great curio, 14 inches in diameter, \$8. Hawk-bill Turtle backs polished, rare, and very pretty, \$7. Japanese Pheasant, mounted as panel picture, cheap at \$15. Fox head, mounted on large shield, with tail on either side and riding whip, \$15. The above are all fine pieces of work and will give eminent satisfaction. F. H. LATTIN & CO., 3571 Cottage Grove Ave., Chicago, Ill.

I consider the Oölogist the best advertising medium of its kind in America and this fact seems to be generally recognized judging from the amount of names in its want columns and from the expressions of its patrons. W. M. M., St. Louis, Mo.

FOR SALE.—Kent Elgin won first in the all age Pointer Stake at the U. S. Field Trials at Grand Junction, Tenn., Feb., 1894. Have Puppies for sale sired by Kent Elgin Boy and Belle L No. 30680 A. K. C. Stud Book. All questions answered by post. E. G. TABOR, Meridian, N. Y.

FOR SALE.—A 5x8 "New Model" camera, with plates, \$6.50 shutter, printing frames and paper, "wignetter" and chemicals. Complete outfit, \$10.00. S. W. ELDER, 177 Rush St. Chicago.

The next day after I received my paper I commenced to receive letters and for the next two weeks I received not less than 75 letters and cards. As an advertising medium the Oölogist can't be beat and I consider the money I spent in advertising through its columns the best investment I ever made. W. E. Drennan, New Sharon, Iowa.

COLLECTORS. Everywhere! Having good and authentic sets, this season's collecting to dispose of, send list and price, on procuring of said sets to H. B. HOLLIS, Wellesly Hills, Mass.

MARINE and GENERAL CURIOSITIES. Send 10 cents for illustrated catalogue and receive either one Star Fish and Skate Egg, or Razor Shell free. All kinds of specimens bought for spot cash. FRED H. BANKS, Stamford, Conn.

All of my exchanges in the Oölogist have proved satisfactory and I think the Oölogist is the best paper of the kind. E. K. Collett, Austin, Texas.

NOTICE. Send me any Natural History specimen valued at 5 cents and receive a Chinese Coin, or one valued at 10 cents and receive two coins, etc. Look! Emu and Ostrich eggs \$1.50 each. W. H. HILLER, 147, W. 23d St., Los Angeles, Calif.

WANTED.—I want to buy Fractional Currency in crisp condition. Also Copper Cents of 1793, 1799, 1804, 1809, 1811 and eagle cents 1856, E. G. TABOR, Meridian N. Y.

From my exchange notice in the Oölogist, I did exchange to the amount of \$300 and greatly increased my library. T. S. Hill, Knoxville, Ia.

FRANK B. ARMSTRONG, Dealer in birds' skins and eggs, Brownsville, Texas will give special attention to the collection, for scientific purposes, of all birds, beasts, reptiles, native to the interior and border of Mexico, and will furnish careful data in regard same. Correspondence respectfully solicited. FRANK B. ARMSTRONG, Brownsville, Texas.

By inserting exchange notices in the Oölogist and by answering others therein, during the past two years I have added more than \$400 worth of new sets to my collection. J. W. Jacobs, Waynesburg, Pa.

FOR SALE.—An A 112 ft Alligator, stuffed. Price \$75. Or will exchange for Birds Eggs. Skins or books on Natural History. Address. F. H. LATTIN & Co, 3571 Cottage Grove Ave., Chicago, Ill.

When answering advertisements always mention the "OÖLOGIST."

45 PIECES OF SHEET MUSIC for 17c. (to introduce it.) JOURNAL, Beaver Springs, Pa.

I find that exc. notices in the Oölogist pay me 100 per cent. better than in other papers. Edw. Wall, San Bernardino, Calif.

FOR SALE.—A perfect mounted specimen of the American Flamingo. Well packed and delivered to Express Co. for \$18. F. H. LATTIN, & CO., 3571 Cottage Grove Ave., Chicago, Ills.

FOR EXCHANGE.—A good Juno Bicycle, 26 inch solid tire, and in A 1 running order. For either Lady or Gentleman. Offers solicited. In Stamps, Books, Birds Eggs, Bird Skins, etc. Address, W. F. WEBB, 3571 Cottage Grove Ave., Chicago, Ill.

I have added two hundred dollars (\$200) worth of specimens to my collection through the Exchange column of the Oölogist. J. M. Kilvington, Mason City, Ia.

FOR SALE.—Foreign stamps in large and small lots. Approval sheets to reliable parties at 50 per cent. discount. *Exchanges solicited.* MRS. W. F. WEBB, No. 9 Kenilworth, 36th & Ellis, Chicago, Ill.

We have received more answers from the ad. in your December number than from any magazine we ever advertised in. Perrine Bros., Water Valley, N. Y.

HEY! I am selling 50 var. U. S. and foreign stamps for only 10c., also 100 var., some unused for 20c. Give them a trial, you will buy more. Satisfaction guaranteed or money refunded. Every 5th purchaser 75 and 125 var., respectively as their packet. GEO. E. CLEAVER, 1132 Perkeomen Ave., Reading, Pa.

• BIBLIOMANIACS.—Weeding my crowded library to utilitarian basis, a limited choice, rare volumes that you'll eagerly take at English Bookshop prices. Stamp for list. *Oölogists*, who want sets of semi-rare waterbirds and raptors, including Loon, Sandhill Crane and Mississippi Kite. *Osteologists*, Breast bone, etc., Ducks, Hawks, Eagles, Owls; List, stamp. Porcupine Quills, assorted, twenty cents per hundred. P. B. PEABODY, Watonwan, Minn.

WE HAVE done more or less advertising in the Oölogist in the past few years and take pleasure in saying that it always more than paid us. We found it the best advertising medium we ever tried. It is more than satisfactory and we wish you and your paper the prosperity you deserve Dicklason & Durkee Sharon, Wis.

WE HAVE some fine Apache and Sioux relics as Kulte Shatlies, Tobacco Pouches, Quivers of tanned Cat skin with hair on. Belts, S.arts, leg-gins, ornaments of various designs, mostly beaded, War Clubs, etc. All are a bargain to any one interested. List for stamp. Address at once, F. H. LATTIN & Co., 3571 Cottage Grove Ave., Chicago.

TO EXCHANGE.—For every 50 cent piece collected before 1875, I will give 1000 foreign stamps from all parts of the world, many rare ones, or for every 25 cent piece made before 1870, I will give 600 foreign stamps, containing four varieties of French Colonies, 5 varieties Japan, etc. Must be in good or fair condition. HERBERT STERLING, Austin, Texas.

FOR EXCHANGE.—"Hornaday's Taxidermy" and "Birds of Michigan" both new for best offer of eggs in sets, oölogical supplies. Send lists JAY G. SMITH, Ripley, N. Y.

EGGS, EGGS.—Large Ostrich eggs \$1.25; Emu eggs 1.50; postage paid. Above eggs and others in exchange for eggs not in my collection. Japanese coins in exchange for eggs. A. E. LITTLE, 225 Market St., San Francisco, Cal.

GOOD SPECIMEN, gold-bearing quartz showing gold sent prepaid on receipt of 20c. (no stamps). Will exchange eggs for personal property. Collectors desiring sets of this locality and Colorado Desert write inclosing stamp. THOS. STANLEY, Banner, San Diego Co., Calif.

My notices have been very paying and satisfactory. I completely exhausted my surplus of Carrier Pigeons. A. V. S., Decorah, Ia.

FOR EXCHANGE.—Two Bicycles safeties; one a cushion tire the other a fine pneumatic. Will sell cheap or exchange for camera, microscope or Natural History specimens. I have also a few books, bird's skins, eggs and other personal property for exchange. Write at once, inclosing lists. A. MOWBRAY SEMPLE, Poynette, Wis.

EXCHANGE NOTICE.—I have fine Shot-gun, Rifle, Revolver, rare eggs in sets, stamps, minerals, scientific books and other articles to exchange for Bendire's "Life Histories of North American Birds," Capen's "Oology of New England," Cones' and Stearns' "New England Bird Life," Coues' "Key" (last edition), Ridgway's "Manual" and other standard ornithological works and back numbers of "Auk," "Bulletin of Nuttall Orn. Club," "O. and O.," etc. Generous exchange given for any of these works in good condition. ROBERT A. CAMPBELL, Hanover, N. H.

STOP. READ. ORDER.—Some of those first class sets with full data, for sale at two-thirds "Standard Catalogue" prices; they include Terns, Petrels, Herons, Hawks, Owls, Cuckoos, Kingfishers, Woodpeckers, Flickers, Hummers, Flycatchers, Magpies, Orioles, Grackles, Goldfinches, Swallows, Vireos, Warblers, Wrens, Thrushes and many others; ninety species in all. Special Bargain for the whole lot. ALBERT R. HEYWARD, JR., Columbia, S. C.

WANTED.—Address of every ornithologist in Maine, young or old; rich or poor; male or female. You are invited to help and be helped in a systematic study of our birds, United Ornithologists of Maine. Address, STEPHEN J. ADAMS, Cornish, Maine.

I have been a subscriber to your paper since its beginning in 1884 and during that time have had occasion to insert notices during each year, and with very good results, always disposing of every thing I had for exchange in a few days. F. H. Farly, St. Thomas, Ont.

WANTED.—To exchange 1st class sets of eggs with data of Southern California birds with collectors of other localities. H. McCONVILLE, 1636, 7th St., San Diego, Calif.

WANTED.—A double action automatic shell ejector revolver. Will exchange for same a scroll saw patterns and blades. Write at once. ALTHUR E. HUTCHINSON, Gaines, N. Y.

ONE PAIR Clipping Irons, will sell for 75c.; one Baltimore Printing Press No. 9, for \$1.50, cost \$5; one dozen King Crabs, large \$1.25 and a collection of sea shells, will sell very cheap, send for list. N. P. BRADY, Hindsburgh, Orleans Co., N. Y.

When answering advertisements always mention the "OÖLOGIST."

FOR SALE. Some fine sets very cheap, following are a few samples. Fulmar 1-1 @ .35, Manx Shearwater 1-1 @ .50, Gannet 1-1 @ .20, Lapwing 1-1 @ .09, Golden Plover 1-3 @ .20, Ring Plover 1-4 @ .10, Oystercatcher 1-3 @ .13, American Osprey 1-3 1-2 @ .25, Black-chinned Hummer n-2 @ .35, Western Wood Pewee 1-3 1-2 @ .10, Bullock's Oriole 1-4 @ .05, Heermann's Song Sparrow 1-3 @ .04. Kindly add 10% extra for postage on amounts under \$1.00. Prices are ea.

WOULD ALSO be pleased to receive advance orders for the following rarities, Glaucous, Iceland and Little Gulls, Greater Shearwater, Bulwer's Petrel, Rufous-crested Duck, European Woodcock, Purple, Green and Spoon-billed Sand-pipers, Greenshanks, Turnstone, White, Gray and Common Gyrfalcons, Duck Hawk, Snowy, Lapp and Hawk Owls, Richardson's (Tengmalm's) Owl, Holboell's Redpoll, Bohemian Waxwing, Northern (Great Grey) Shrike, Nutcrackers, Crossbills, Kinglets, etc. Also fine clutches of Black, Red, Hazel and Sand Grouse, Willow, Rock and Iceland Ptarmigans and the following very showy and scarce species, Indian, Griffon, Arabian, Egyptian and Asiatic Vultures; Golden, Imperial, Adalbert's, Rough-footed, Spotted, Oriental, Bonaparte's, Dwarf, Greenland, Cinnereous, Serpent, *Aquila fulvescens* and *Aquila vindhiana* Eagles; Cinnereous, Demoselle and Numidian Cranes; Black, Egyptian, Indian, Honey and Common Kites; Great, Little, Hombara and Macqueen's Bustard's, and many varieties of Falcons, Buzzards, Hawks, Warblers, Finches, Snipe, Part-ridges, etc.

WANTED TO EXCHANGE with all collectors, first-class sets of American and foreign birds eggs, will have a very full list and can use many common and rare kinds in large series. Want 100 eggs of Sparrow Hawk in fine sets.

Wanted cheap for cash or choice exchange, full sets of Loon, Tropic Birds, Flamingo, Spoon-bills, Kites, Sharp-shin, Golden Eagle, Vultures, Caracaras, Chuck-will's-widow, Whip-poor-will, Parakee, etc. in any quantity. Correspondence solicited from all.

TO ADVANCED COLLECTORS having special desiderata I would say that I can procure many very rare varieties such as Lammergeyer, *Gypaetus barbatus*, Olive Tree Warbler, *Hyppolais olivetorum*, Snow Finch, *Oreospiza nivalis*, *Tringa islandica*, *Fringilla teydea*, *Halastur indus*, *Upupa longirostris*, *Accentor atrogularis*, *Megolophrus nigelli*, etc. C. W. CRANDALL, Woodside, Queens Co., N. Y.

THE NAUTILUS.

A monthly devoted to the interests of Conchologists. Edited and published by H. A. Pillsbury, Academy of Natural Sciences and C. W. Johnson, Wagner Free Institute, Philadelphia, Pa. Send for sample copy.

GOING TO BUILD?

Send for illustrated catalogue, containing 26 handsome designs, FREE, Address SHOPPELL'S MODERN HOUSES, 63 Broadway, N. Y. J6t

EGGS.

From the *Orient* and *Assam* (Malakka) India, Australia, Africa, etc., correctly named at moderate prices, also European and exotic birds skins. HERMANN ROLLE, Emdeener St., 4, Berlin, N. W., Germany

FOR Five extra Ore. Arrow-points, one 9-inch Spear, one Drill and a fine Scraper, all prepaid.
J. F. BOWEN, Box 62, Iuka, Miss.

When answering advertisements always mention the "OÖLOGIST."

Babbitt's Glove Kid Tan

Is used by over two-thirds of the taxidermists of the U. S., which PROVES it to be a superior article. The past few years I have advertised this tan in many papers in the U. S., but there is without doubt many who do not know the merits of BABBITT'S GLOVE KID TAN.

It will tan furs clear through and leave them as soft as GLOVE KID.

It is always ready for use and always gives the same results.

It costs \$1 per bottle (which is the regular price) to tan ONE DOZEN fox skins, making it the cheapest tan on the market.

It will do the work in one-half the time required by the old method, etc.

The object of this advertisement is to introduce it, so for thirty days from the date of issuing this paper I will send a bottle postpaid for .50. After that date the price will be advanced to \$1. I have a circular giving testimonials from those who have used it the past few years. It will be mailed you free. No live workman will tan furs by the old method after reading the wonderful results to be obtained by using BABBITT'S GLOVE KID TAN.

Babbitt's Auxiliary Barrel's or "Tubes"

Is an invention which allows you to use a 32 or 16 bore shell in your 12 or 16 bore gun. They are as easily removed as a shell and will not interfere with shooting large game.

DON'T try to collect small birds with your 12 or 16 bore shot gun. It will ruin your birds about every time. It will cost but \$1.50 for an auxiliary barrel, either a 32 or 38 cal. and you will save its cost in powder and shot inside of three months. A full assortment of above are, always kept in stock to FIT ANY MAKE OF GUN.

It is surely something which every collector should have. A price list giving testimonials from the leading collectors who have used them, in fact everything you wish to know about them, will be mailed you upon request.

Artificial Leaves and Ferns.

I take great pride in my new stock of leaves and ferns; over fifty different shapes of leaves and each one can be furnished in eight styles, making an assortment of over 400 styles. A sample pack will be sent you for .20 showing the principal styles. In ferns I have many styles, ranging in price from .25 to \$1.50 per dozen. Several of the styles are entirely new to this country. If you work on case work it will pay to drop me a line.

Glass Eyes.

My catalogue will give you a description of every style made, and THE LOWEST PRICES to be obtained IN THIS COUNTRY.

Tools and Supplies

Are imported direct from England and will give satisfaction.

Remember

I deal in everything used by the naturalist or taxidermist and would be pleased to mail you one of my catalogues. It contains many things that you wish to know.

JAMES P. BABBITT,

10 Hodges' Ave., Taunton, Mass.

Advertising in the Oölogist pays as I know by experience. H. C. Tarboro, N. C.

My exchange notice in the Oölogist was satisfactory. I received over 57 letters and have made a good many exchanges. W. F. D., Minneapolis, Minn.

I can not praise the Oölogist too highly. Exchange notices in its columns have always received replies far beyond my most anxious hopes. Received over 500 letters in response to my ad. in Oölogist two years ago while publishing "The Loon." T. Surber, White Sulphur Springs, W. Va.

125 SPECIES Marine shells, 75 species Cretaceous fossil shells, minerals, polished agates, corals, antelope horns, for marine shells, publications on Conchology, Webster's Unabridged Dictionary, Century or Leslie's Popular Monthly. Send lists. HOMER SQUYER, Mingsville, Mont.

Last August ('90) I had an exchange notice in the Oölogist and from it I received over 150 letters and I exchanged about \$125 worth of specimens, and all it cost was 33c. I ran out of specimens before I had answered one-half of the letters. I also had a notice put in a recent number. The January number reached me the 9th and now I have received 20 replies and sometimes I get 8 letters in one mail. I am positive I will receive over 125 letters in reply to this last notice. Of course the last number has not yet passed the Rocky Mountains, 20 letters in four days for a beginning. Shortly shall expect to receive that many in a single day. For a collector there is nothing better than to have an adv. or exchange notice in the Oölogist. It is a boon for collectors and to say it pays big is to say it but very mildly. W. E. Snyder, Beaver Dam, Wis.

NEW STOCK of "Coues' Key" just received, price \$1.50; Goss's "Birds of Kansas" \$6.00; Miller's "N. A. Geology and Palaeontology" \$5.00; Hornaday's Taxidermy \$2.50; Jordan's "Manual of Vertebrates" \$3; Davie's "Nests & Eggs" \$1.75; Lewis' "American Sportsman" \$2.50; Langille's "Our Birds in their Haunts" \$2.50. Send order at once. F. H. LATTIN & CO., 3571 Cottage Grove Ave., Chicago.

BIRD LIFE Illustrated. The Nidologist is recognized by all as a superbly illustrated monthly magazine of ornithology and oölogy. February number contains "Notes on the Hornbills" by Dr. Shufeldt, with page half-tone of birds and nest; "Bird-nesting in Canada" by Walter Raine, with two large half tones, illustrating nests and eggs of twelve species of ducks; Portrait of Dr. Shufeldt; "Discovery of Nest and Eggs of Wilson's and Leconte's Sparrow," etc. Sample copy sent for 10 cents, subscription \$1 per year. H. R. TAYLOR, Editor and Publisher, Alameda, Cal.

WANTED.—To exchange first-class eggs for same this coming season. Collectors of other localities kindly write stating your wants. ORLANDO SHEPPARD, JR., Edgefield C H. S. C.

TO EXCHANGE.—Old U. S. cents, for taxidermists' and oölogists' tools. Also a 32 cal. revolver toward Coues' Key. Write for description. P. A. MULTER, Ashford, N. Y.

PHOTOGRAPHS Wanted.—Photos of the Anhinga from life or fine mounted specimens. Will pay cash or give good exchange. F. M. RICHARDS, Farmington, Maine.

WANTED.—Orders for birds in the meat or fresh skins. Can furnish 20 kinds of Ducks, etc., etc. Send stamp for list. W. R. BROWN, Milton, Wis.

BIRDS wanted. Must be young and sound. State what you have with price. Will exchange for printing or pay cash. Address, A. J. SMITH, 73 Exchange St., Rochester, N. Y.

FOR SALE.—One pair Beagle Hounds. Thoroughly broken, that can't be beat in the country trailing a rabbit, and two pairs B. B. R. Game Fowls. L. S. FRENCH, Mathews, C. H. Va.

POP CORN.—Rice, the best Popping Variety, crop of '92 shelled. By freight or Express at purchaser's expense; 6c. per lb. In lots of 50 lbs. or over, 5c. Only about 800 lbs. left. F. O. B. and no charge for sacks. Will exchange for desirable eggs in sets, specimens, or books on Natural History. FRANK H. LATTIN, Albion, N. Y.

AN OPPORTUNITY.—I expect so spend the summer months in special work in Zoology and Botany, and could arrange to furnish duplicates of plants, bird skins and eggs, batrachians, serpents and insects, including pupae and inflated larvae. Anyone desiring to arrange for a series of any of the above by purchase or exchange may address WILLIAM OSBORN, 95 Maple St., Nashville, Tenn.

WANTED.—January, July and August numbers of Goldthwaite's Geographical Magazine of the year 1891. Will exchange insects or valuable books on Natural Science for same or purchase at a good price. All letters answered PAUL VANDEREIKE, St. Croix Falls, Wis.

SET of Three Note Books in Case each contains 72 pages, bound in flexible cloth and set comes in a nice colored cloth covered case. Will send the set prepaid for only 8 cts. F. H. LATTIN & CO., Albion, N. Y.

TO EXCHANGE.—Eggs in sets and singles of this locality for those of other localities. V. W. OWEN, P. O. Box, 774, Los Angeles, Calif.

OÖLOGISTS WANTED.—We want at once, copies of the Oölogist as follows: July-August, 1886; January-February, 1887 or Dec., 1888, with the former attached; June, 1888. We also desire copies of our old 1885 "Oölogist's Handbook." For each and every copy of the above publications mailed us not later than April 15, 1894, we will give 12½c worth of anything we advertise or offer for sale or will send credit check good for the amount. We will also allow 7½c each for the following numbers, viz.:—June-Sept., 1887; April, 1889; March, 1890; August, 1890; May, 1892; February, 1893; March, 1893. All must be complete, clean and in good condition. Address at once. F. H. LATTIN & CO., Albion, N. Y.

TO EXCHANGE. Strictly first-class sets with original nests of New England birds, for same, during the coming season. Many common kinds wanted. HENRY R. BUCK, Sheffield Scientific School, New Haven, Conn.

FOR EXCHANGE.—Large number of mounted Birds and Animals. Want fresh skins or Birds in the meat. WM. MICHELFELDER, Taxidermist, Elizabeth, N. J.

LOOK! LOOK! A Fancy pair of Callipers (2½ in.) only 20 cts. Scalpels 40 cts. each. Long handled Brain Spon 25 cts. CHAS. G. COLLINS, Rox 431, Garden City, Kas.

CAPEN'S OÖLOGY of New England. The edition of this magnificent work is exhausted, we have only one copy left. Price \$15. If you want it speak quick. F. H. LATTIN & CO., Albion, N. Y.



SYSTEMATIC COLLECTIONS.

With unusual facilities for securing educational materials, it is proposed to take the lead in furnishing systematic collections for teaching MINERALOGY, GEOLOGY, and ZOOLOGY in Schools and Colleges. Individual Specimens also furnished. Catalogue sent on receipt of 6 cts. in postage stamps.

RELIEF MAPS AND MODELS.

Special attention given to Relief Maps. Send for circular describing Grand Canon, Yosemite Valley, Yellowstone National Park, Mt. Shasta, Mt. Vesuvius, Kentucky, Massachusetts, New Jersey, Etc., Etc. Also model of the *whole United States, with adjoining ocean bottoms, modeled on correct curvature.* Many of these made especially for Schools. New Relief Map of *Palestine*, Modeled for the Palestine Exploration Fund, now ready.

LANTERN SLIDES.

Series of Lantern Slides for class illustration in Geology, Physical Geography, Etc.

METEORITES.

A good price paid for meteorites of all kinds. New and undescribed ones especially desired. An extra price paid for the entire "find" or "fall". Meteorites also cut, polished and etched.

WASHINGTON SCHOOL COLLECTIONS.

These collections, decided upon after numerous conferences with teachers and experts connected with the U. S. Geological Survey and U. S. National Museum, have just been introduced into the schools of Washington, and will be known as the Washington School Collections. It is safe to say that no collections of equal excellence have ever before been offered in this country at so low a price (\$2 each). Send for circulars.

EDWIN E. HOWELL, 612 17th St. N. W., Washington, D. C.

Testimonials Wanted.

We want you for an 1894 subscriber to the OÖLOGIST. We also want you to show this month's OÖLOGIST to any friend who is now a non-subscriber, whom you think our little monthly might interest. This issue is an unusual one, from at least an advertising standpoint—our regular monthly editions contain an equal amount of reading matter but only from 8 to 16 pages of advertisements. The quality, finish and weight of paper used in our regular edition is much better than that used in the "Sample Copy" numbers this month.

We know the OÖLOGIST is of value to the class for whom it is intended, and we also believe it to be of value to you.

Many of the leading and all of the coming ornithologists of America are on our subscription books.

Since Jan. 1st '94 we have paid over \$30 for back numbers of the OÖLOGIST in order to supply the demand for the same, and we still want more and are making liberal offers for the same in this OÖLOGIST.

Testimonials are always appreciated by a publisher and we have been pleased in this manner thousands of times, and could if space permitted fill every page in this month's edition with gems in this line of the first magnitude, but we have been receiving a class of testimonials that both please the mind and enlarge the pocket-book—testimonials of this character are always sure to touch the heart of the most hardened publisher.

Here are few samples, which we consider models, that have materialized during the short month of February. The first three from Mr. Wm. Brewster of Cambridge, Mass., who is recognized the world over as the leading authority on North American Birds and whose opinion today carries greater weight in the making and unmaking of species and varieties to the recognized American avian fauna than that of any other living person:

"I wish to obtain two sets of the OÖLOGIST from the beginning. If you can supply them please name price. If you cannot supply them do you think an advertisement in your columns would meet with success? Dec. 4, 1893."

"I shall be glad to take the two sets of OÖLOGIST @ \$4.00 each, but they must be completed before I shall be willing to pay for them. You can take several months to hunt up the missing numbers if necessary. Dec. 7, 1893."

"I have just received from you the sets of OÖLOGIST and enclose \$8.00 by cheque in payment for the same. Feb. 11, 1894."

The following is from Dr. L.B. Bishop of New Haven, Conn., who is making a special study of albinism and unusual coloration in eggs:

"Please send me Nos 1 to 98 of the YOUNG OÖLOGIST and OÖLOGIST as advertised in the February OÖLOGIST. I send with this money order for \$4.50 as payment."

And the last which we have space to give came just as we were going to press as an accompaniment to a renewal of subscription and is from Mr. M. M. Coon, the well known taxidermist of Jefferson, Ohio:

"I would not attempt to do business without the OÖLOGIST."

READER. We want and expect a testimonial from you—not necessarily as weighty an one as from Mr. Brewster or Dr. Bishop nor as flattering as from Mr. Coon, but in the few and feeble words of the writer of this page the following would be both pleasing and sufficient:

"Enclosed find 50 cts. for which please send me the OÖLOGIST for 1894."

To this attach your name and address in full and enclose—with the necessary 50 cts. in stamps, postal note, express or P. O. money order—in a strong envelope, seal well and address carefully to the Publishers of the OÖLOGIST, Albion, Orleans Co., N. Y. We remain, as ever, most faithfully yours,

F. H. LATTIN & Co.

The Victor Carpet Stretcher

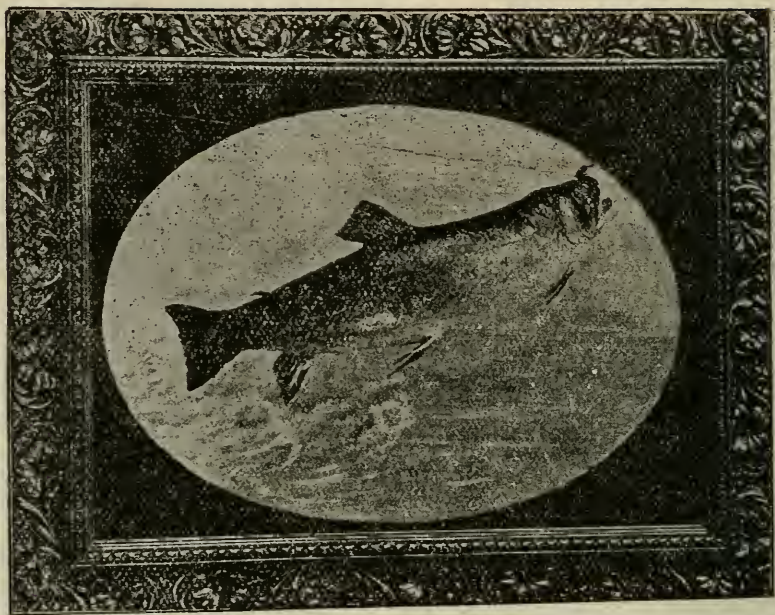
Advertised on another page, is a good thing. We are using one.

I have been acquainted with Mr. Malory the Inventor and Manufacturer for a number years—he is reliable.

I have an old schoolmate friend who has sold thousands of these stretchers, during the past few years and has made big money thereby.

Faithfully, FRANK H. LATTIN.

We have a large Premium List of NOVELTIES, which we give for securing New subscribers for the OÖLOGIST. A copy will be mailed you for stamp. Address, Publishers of the OÖLOGIST, Albion, N. Y.



Our Artistic Bird and Game Pieces.

Our exhibit of Forty Bird pieces at the World's Fair created quite a furore. All were suitably framed and covered with the patent Oval Convex Glass Shades with flat corners, hermetically sealed—making them absolutely air tight, dust and moth proof—and will last a life time. All of the "live" pieces were with painted backs made to represent as nearly as possible the natural habitation of the birds. The birds mounted, standing as in life, on natural rocks, stumps or ledges. Our Hanging Dead Game pieces had either plush or natural wood backgrounds. The value of the pieces exhibited ranged from \$18 to \$100 each. The Trout piece (illustrated above) was a very popular one. The trout itself was a $3\frac{1}{4}$ pounder and when mounted in this manner makes an elegant piece, suitable for any place and admired alike by all whether a disciple of Izaak Walton or not. It is perhaps needless to add that the latter class fairly raved over the sample piece in our exhibit and many could not leave without placing their order for a duplicate. In a review of the "Ornithology of the World's Fair" one of the editors of *The Auk*—the high-toned American Journal of Ornithology—says that from an *artistic or taxidermic* standpoint the exhibit of "panels of game-birds shown by F. H. Lattin & Co. are probably the best."

We have a special catalogue of our work in this line and if you are at all interested would be only too glad to mail you a copy.

Address, F. H. LATTIN & CO.,

Albion, N. Y. or 3571 Cottage Grove Ave., Chicago, Ills.

Should any of our patrons desire to purchase within the next 30 days, we will make them a special price on any piece we may have in stock at our Chicago House.



BUREAU OF NATURAL HISTORY.

ESTABLISHED 1876.

SOUTHWICK & CRITCHLEY,

354 Westminster Street, Providence, R. I., U. S. A.

DEALERS IN

Skins, Eggs, Minerals, Shells,

Naturalists' Supplies and Publications.

We solicit your orders in Taxidermy,
promising the best Methods, and
finest results, on museum work
or trophies of hunting, from
either dry skins, or fresh spec-
imens.



A Mineralogical Dialogue.

YOUNG MINERALOGIST. Pa, the boys say the times are harder than they have been since 1837, is that so?

FATHER. Yes, my son that is very true.

Y. M. Well then why is it that English & Co. have sold more minerals in the first two months of the year than they ever sold before in three months?

FATHER. I'm glad you've mentioned that house, for I've known their excellent methods ever since they begun business many years ago. I think their great success in these hard times is largely due to their good judgment in adding to their stock so many specimens of such an attractive character that mineralogists could not resist the temptation to buy them.

Y. M. They certainly have a magnificent stock, Pa, for I was in there the other day and spent the \$10 I got for Christmas and you know I went to three other mineral stores in other cities and didn't see anything I wanted unless the price was way up in G.

FATHER. Their low prices are no doubt another reason why this house has drawn so much trade. Then, too, while it has been their rule for years not to allow any discounts, they have recently offered a 10 per cent. discount to every one ordering of them prior to April 1st. What specimens did you buy?

Y. M. I got the most beautiful crystal of Sulphur I ever saw, for 50 cents; an elegant, large piece of Rubellite in Lepidolite for \$1.00; a brilliant group of Vanadinite crystals for only 25 cents; a sharp twin crystal of Orthoclase for 25 cents; splendid specimens of Azurite, Malachite, Descloizite, Garnet, Orpiment and Valencianite for 50 cents each; a superb group of Calcite crystals for \$1.00; a bright black group of Sphalerite crystals for 50 cents; a lovely Calcite twin for \$1.50; a gorgeous little piece of Australian Opal with a fine play of colors for 25 cents; a beautiful group of crystals of Fluorite for \$1.25; a bright red banded Agate for 75 cents; a most curious group of Pyrite crystals for 35 cents and nice loose crystals of Selenite, Quartz, Dysanallyte, Hematite and Pink Garnet for 10 cents each.

FATHER. That is certainly a fine lot! I see you have brought me a copy of their new Spring Bulletin.

Y. M. Yes, they gave me that for nothing. I must be off now, Pa to see the specimens Tom got yesterday. He agrees with me that there is no place for minerals like **Geo. L. English & Co.** 64 E. 12th St., New York City.

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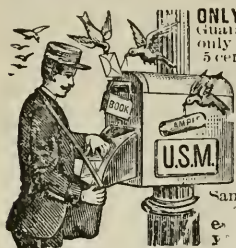
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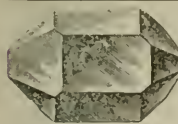
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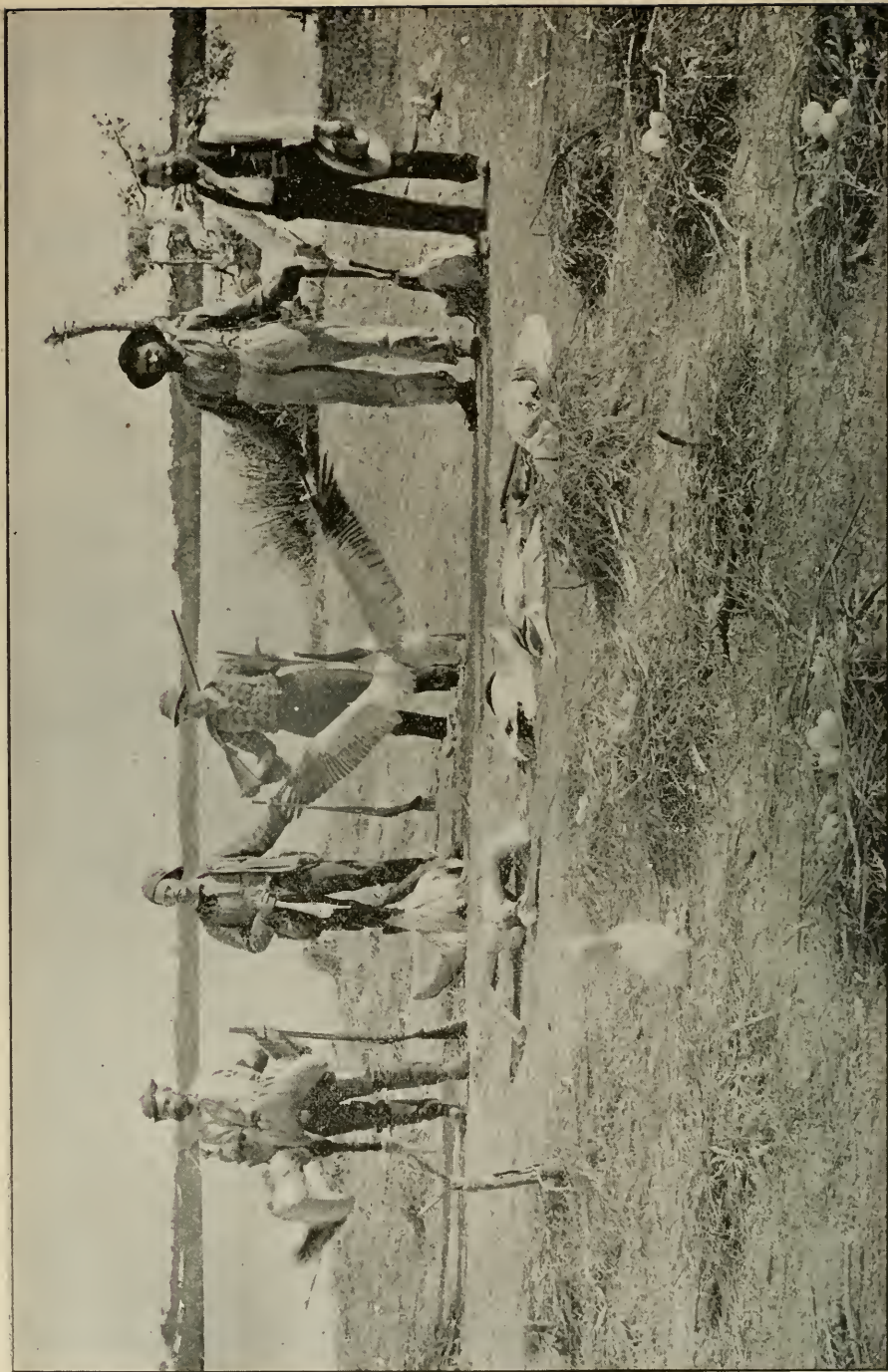
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VOL. XI. NO. 3.

ALBION, N. Y., MARCH, 1894.

WHOLE No. 101

Nesting Habits of the Brown Pelican in Florida.

It has been a question with me for some years whether many birds were not enemies to man by reason of their destruction of certain animals and vegetables upon which man depends. I am aware that the point is now almost universally taken that in the economy of nature all creatures are required to maintain a proper balance. In that excellent book on the Hawks and Owls by Dr. Fisher, it is quite conclusively shown that the large majority of our rapacious birds are beneficial to man while there are but very few about which there still remains any doubt.

However, although the investigations of scientists have demonstrated that nearly all birds in the United States are man's assistants, it has not as yet been proven to observers that many of the fish-eating species are beneficial.

Let us take the Brown Pelican as an example and strike a balance in reference to its vast destructive powers upon the fishes, wherever it is found. This bird is provided with marvelous digestive powers and is capable of swallowing a great many fish in a year.

We will suppose that an adult Pelican will swallow, or at least destroy sixteen fish a day, each weighing four ounces (a low average); we find that the allowance reaches one thousand, four hundred and sixty pounds of fish per year for a single individual. One colony of Pelicans embracing 5,000 birds would require over 3,600 tons of fish or way over 7,000,000 pounds, which, supposing that the same amount could be marketed at five cents a pound would amount to \$350,000.

These figures, which I doubt not are most reasonable, are truly remarkable,

and when we consider that there are hundreds of these colonies, a few being much larger, but mostly smaller, in the Union alone, the calculation is truly terrific.

On principle it might be well to kill off these birds which feed almost exclusively on our food-fishes, but we might with equal propriety advocate the destruction of the Fish Hawk, Kingfisher and many species of Gulls and Herons and others well known.

The Brown Pelican is not commonly seen north of 35 degrees on the Atlantic coast, and in most localities formerly occupied north of 30 degrees, the birds are now quite scarce, but isolated rookeries are found south of 28 degrees, some of which are quite extensive on the eastern coast of Florida. On the gulf coast the nests are also found, sometimes in large rookeries.

Not far from Galveston, Texas there was a factory for the rendering of Pelican oil from the bodies of the birds taken near at a celebrated place of resort. This oil factory was allowed to run unmolested by the state for several years and only shut down when the supply of birds ran out and the few remaining birds unbutchered left for other quarters.

On one occasion I visited the nesting place and general resort of a large colony of Pelicans on Indian River, Florida. Indian River, so-called is not a stream in any sense of the term but a salt-water lagoon. Separated from the Atlantic ocean by a long, low, narrow

THE FRONTISPIECE:—The picture or view shows a group of Pelican nests; some with eggs others with birds of different sizes. One large one which is in the downy plumage is seen hissing at the tough looking crowd of shooters who stand on the shore of the island. In the background is seen the so-called Indian River which is covered with Pelicans but which the camera failed to show.

later, when they sit up in the wreck of a nest and hiss spitefully at the collector, making stupid lunges with their long, ungainly beaks.

By using care I secured nearly two hundred fresh eggs for my cabinet and my collector friends at the north. These eggs were packed in a big box with plenty of grass and were about all one man wanted to carry through the long rank grass on the island.

The eggs are white and covered with a thick incrustation of lime. After the eggs have been in the nest a few days they become much soiled and in this way can be told from the fresh eggs. They may be readily scraped with a sharp knife and cleaned, but of course to an accurate oölogist this plan is not preferred, as eggs should be allowed to remain natural.

There are hundreds of interesting points on which I would like to speak, especially on the habits of the old birds in flying, fishing and feeding their young, but space forbids more at present, although I may give additional notes if requested.

After shooting a number of specimens for the collection we ranged along on the shore and Mr. Henry Young took a view of the party with his camera, with a foreground of nests, eggs and young.*

Next day I blew all the fresh eggs and packed them in Spanish moss, and they arrived at my Michigan home in perfect condition. I attempted to eat a Pelican's egg, but the flavor was too strong for me.

MORRIS GIBBS.

W. A. Oldfield of Port Sanilac, Mich., writes that on the night of Feb. 3d his store and contents were destroyed by fire. He also lost his bird notes, his accounts with collectors and a portion of his collection.

Evening Grosbeak.

(*Coccothraustes vespertina*)

Truly this is well named a bird of the night for, though not literally of nocturnal nature, it is canopied by blackness of such ebon hue as might make Pluto envious or the shades of Erebus pale. Here, found in the plumage of our bird is a most remarkable triad of colors, blending, too, as they do, in such beauty that, to say nothing of the beak which can be distinguished almost as far as the bird itself, it must indeed be one who cares not for the wonderful and mysterious in Nature that will pass this Grosbeak without more than cursory notice.

Prof. Cones sees in this bright avian being the allegory of diurnal transmission. I have watched them with wonder akin to awe, as they congregated in the tree tops at early morn or at eventide, with the soft rays of a rising or declining sun heightening or lessening the degree of intensity of their colors, and can well see wherein he draws his illustration.

In the adult male the plumage colors are black, white and yellow, with intermediate shades of the same. The crown, wings, tail and its upper coverts are glossy black. Frons and line over the eye, rump, under secondary and tail coverts, yellow. Tertiaries and inner greater wing coverts are white, forming a broad patch that contrasts deeply with its setting of black and gold; and is conspicuous either when the bird is on the wing or resting. Breast and under parts are yellow-olive, shading to deeper olive on the throat and around neck, and fading into the yellow of the under tail coverts. Feet, dark flesh color. Bill, greenish-yellow. Length of both sexes about the same, averaging 7.75.

Male and female differ much in shade of markings, the latter being

* A half-tone of this photo is given in this OÖLOGIST.

not so striking in appearance. The white patch of wings of male is lacking or imperfect, and the colors in general are subdued, excepting the white spaces on inner webs of the primaries which are clear. Underneath brownish, with faint, irregular traces of yellow. Young of the year resemble the female.

Both sexes arrive here from the North together, usually in November, and take their departures in March or April, though a few loiterers may remain later.

Information regarding the nidification of this species is very meager, there being but few recorded instances of its nesting. Its eggs are said to be similar to those of the well known Rose-breasted Grosbeak, but the evidence is not altogether satisfactory. Of this bird there still remains much to be learned.

Their food here seems to be the buds of the cottonwood (*Populus monilifera*) and box-elder (*Acer negundo*) and in these two trees they are more often found than in others, generally pecking at the buds.

They manifest little fear for mankind and continue to eat uninterruptedly while the observer stands near them. My winter notes of a certain date, read: This morning I saw a lone Evening Grosbeak in a box-elder near the house. It seemed not in the least shy of me, as I walked within a few feet of it and it hardly hesitated in its work of gathering a breakfast of elder buds. This is but one of many times that I have noticed its rare trustfulness.

They are not common here, at least not very common, but can not be called rare. This season I have not noted their presence. The winter of 1890 they visited us in considerable numbers and could be found in their favorite trees almost any day until late in the spring. That same winter we read many notices of their occurrence where they had not before been observed. They are erratic and even here in Minn-

esota, where we can expect to see them, we often pass a winter without noting their presence. They come and go without warning. Flocks, two, three or a single bird will be seen, and perhaps found for several days in the same locality, only to vanish suddenly and be as though they had not been known.

I well remember my first acquaintance, made several years ago, with this remarkable bird. It was in the month of February. I was passing near some trees when a flock of Evening Grosbeaks flew over my head, uttering a cry so like the fall notes of the Robin that, involuntarily, I paused and looked for that well known bird, hardly believing my ears had deceived me even when I saw that the Grosbeak was the author of the sound. In a moment they had passed from sight, and left me meditating on what I had heard and witnessed.

The momentary view of an unfamiliar being of such wonderful and striking appearance awakened in my mind a strange train of thought. I stood lost in wonderment, hoping, fearing, doubting, yet wishing to believe I beheld visitors from the mystic land. Other strange feelings crowded in upon me as I stood gazing into the distance where that bright vision had so lately vanished, which all the more almost convinced me I saw something not of ordinary life. But, not altogether happily, I have become familiar with this shadowy pilgrim from the north, and I cease to wonder so much. But from my first thoughts there must always linger around the Evening Grosbeak a weirdness that will ever come before me with the form or remembrance of this, after all, little known bird—fit representative of a little known region.

A strange quietness broods o'er thy tri-colored form

When thou comest, a spirit born on wings of the storm;

As boreal spirit, of the Hesperides,
 Is thy home far beyond trackless, untraveled
 seas?
 And do the blasts of the North thus drive you
 astray?
 Are thy bright tinted vestments Auroras dis-
 play?
 What meaneth the darkness in thy vesture of
 gold?
 The immaculate setting thy pinions enfold?
 O stay! return not yet to thy far northern
 home
 'Till thou givest me tidings not found in a
 tome;
 I read, "*vespertina*," thy name, "life little
 known."
 Mysterious bird, thy guarded secrets thy own,
 For, weird, silent, and brooding, thou shrouded
 remain
 In the mystical glamour that palls thy domain,
 Just for a brief season and the sun brings the
 day
 When thou wilt spread thy dark pinions—van-
 ish away.

By the time Boreas is nearly ready to
 withdraw and let the gentle south wind
 unchain rivers and lakes, and loose the
 fastenings that the buds may burst
 forth on the trees and quietly hant at
 the approaching vernal season, the
 Evening Grosbeak, on sable pinions set
 with white, flits silently by, like some
 strange thing of inauspicious omen, re-
 turning to its northern fastnesses and,
 I suppose, domestic felicity.

LESLIE O. DART,
 Litchfield, Minn.

My Friend, Hairy.

While walking through a strip of
 woods on a beautiful Sunday afternoon
 in the latter part of May, 1890, my at-
 tention was called to a Hairy Wood-
 pecker, whose actions showed it to be
 laboring under great excitement. In a
 few minutes I found out the cause—it
 was my too close proximity to a dead
 poplar, near the top of which was a
 hole.

The tree was a bad one to go up with
 its loose, decaying, dirty bark, with a
 nest of black ants inside, and the hole
 looked small, much too small for a

Hairy Woodpecker to get into, and
 worst of all I had on a new pair of Sun-
 day pants.

To climb, or not to climb, that was
 the question, but the Hairy was getting
 more excited than ever, so I climbed—
 up through the nest of crawling ants
 and falling dirt, up to the hole, thirty
 feet up, or so; then stopped to rest, but
 a moment later, slid wearily back to
 earth again for I heard the young peep-
 ing in the hole.

After emptying the dirt from my
 clothes and trying in vain to make my
 pants look as fresh as formerly, I turned
 homeward, not feeling particularly
 pleased with my ramble. But at least
 I had seen how the Hairy built and had
 found out the time of breeding.

I kept the remembrance in my mind,
 and the sixth of May, of the following
 year found me again in the same strip
 of woods, and soon standing by the tree
 I had climbed the year before. A limb
 cracked under my foot, and out of the
 Hairy's hole, which had been enlarged,
 dashed a Yellow-shafted Flicker. But
 I was not after Flicker's eggs, and be-
 sides it was too early to expect any, so
 I moved on. Back and forth I walked
 through the strip of woods, seeing plen-
 ty of signs but no "good" hole until I
 arrived at a clump of dead poplars, and
 in one of them, about twenty feet from
 the ground, I saw a hole.

The ground was strewn with fresh
 chips, which had been thrown from the
 hole. A rap on the tree brought out
 the female Hairy. The tree was not
 over six inches in diameter and was too
 shaky to climb. This difficulty was
 soon overcome, for near by grew an ash
 sapling. I was soon in the top branch-
 es of the sapling, and my weight bent
 it over against the stub. It seemed as
 if everything had been planned for my
 convenience, for at the top of the sap-
 ling was a crotch which fitted around
 the stub and kept me from swaying, a
 dead limb kept the sapling from sliding

down, and two others served as foot-rests; and the hole came at just the right place to get at it easily. I then took out my "egg scoop" (consisting of a little bag sewn in a loop of a wire eighteen inches long) and proceeded to business.

I reached carefully down with the "scoop" until I could feel it touch the round surface of the eggs. One at a time they were brought up to light through the ten-inch cavity, four in all—four beauties with a yellowish pinkish color. How carefully I packed them in my box and then slid carefully to the ground! But I had to take them from the box and look at them again, before I was ready to pack them for carrying home. That evening however they were finally laid away safely in my cabinet. For a week, though, I had to look at them two or three times a day to see if they were all right.

About two weeks afterwards, on the 21st of May. I happened in the same locality again and went to the Hairy's hole and tapped on the tree. What was my surprise to see the female leave the hole. I did not lose much time in reaching the hole and was soon rewarded with a set of four, which were as beautiful as the first set.

Meanwhile the female was flying around and crying "quit! quit! quit!" But I did not "quit" and soon this set was lying with the first in my cabinet.

On the second of June, I again visited the piece of woods to look after some warblers' nests I had found on a previous visit. Passing the "woodpecker tree," I threw a stick at it for luck. It struck, and immediately the male Hairy left the nest. And as he flew to an oak tree near by, the notes he uttered seemed to be "quit, quit, quit, get-out-of-this, you've-had-enough!" But an "egg-crank" is hard to satisfy, and soon there was another set of four Hairy Woodpecker's eggs in my collection. I did not get a chance to visit the

Woodpecker again that year, and so do not know whether another set was laid or not. But I think that three sets from the same bird in one year is enough for most anyone.

The following year on May 3, 1892, I was hunting for my Hairy again. The wind had blown over the nesting site of the previous year. However, in half an hour, the new site was found; it was in a five inch poplar, 15 feet from the ground, not a limb to stand on and no convenient sapling. A couple of feet above the hole, and on the opposite side of the tree, was the remains of a limb. I climbed up, hung my climbing strap over the limb, buckled it up and, sat in the loop thus formed while I examined the hole. It contained only one egg which I left. I did not see either of the birds this time.

On May 14th, I was on the spot again. In response to my rap the female left the hole, and it seemed to me she recognized me and as she flew to a neighboring tree she seemed to say "you, you, you, here again?" I obtained a set of four, incubation about one-third.

On May 28, I obtained a fresh set of four and did not go near her again that year.

The following year I did not go out until the leaves were rather thick on the trees. My bird was not to be found in her old haunts. But as I was going home she came to meet me from another strip of woods and it seemed to me she said "you, you, you, got-left" and I had, for the leaves were so thick I could not find the nest.

H. T. VAN OSTRAND.

A Few Thoughts.

I have noticed with increasing disapproval the tendency of a large number of collectors to pay more attention to the simple gathering together of a large number of shells of different color, shape and markings, for the purpose

of being able to say they had so many different varieties, than to the study of the habits and peculiarities of the birds themselves. The persons who follow this plan are not naturalists; they are simply collectors, and collectors of the worst sort. There are naturalists to my knowledge who have only a collection of some thirty or forty species of eggs, but their knowledge of the birds themselves and their habits is something every naturalist with a collection of hundreds of kinds cannot boast.

I think that the idea of collecting more eggs than is wanted in one's own collection has gained too much ground with our naturalists. It is not the student of nature who does this sort of thing; it is simply, as you might say, the pot-hunter. And truly the pot-hunter is the more noble of the two (if such term is applicable to either), as the birds have a slight chance (and very slight too) for their lives with the pot-hunter, while the rapacious egg-hunter carries off the eggs by the hundred without a thought as to the immense number of birds he is really destroying.

It seems to me that some steps should be taken to stop this willful and cruel slaughter. The gaining of a few paltry dollars at the expense of the lives of hundreds of the beautiful inhabitants of the air seems to me rather a poor exchange. Did any one ever hear of an Audubon or a Wilson committing such an act? No, never! They would have considered themselves forever disgraced and totally unworthy to occupy the high place which they do among American ornithologists.

I think we should all depend upon ourselves for the specimens in our collection; not upon the efforts of others. Then there would be less incorrect identification. The number of eggs in the average collection which are wrong-

ly identified are usually about as large as those which are properly named.

If all collectors could and would read the life of Audubon and would try to imitate him more closely we would have a far better class of naturalists in every respect, in our little ornithological world.

Anyone who visited the World's Fair will have seen that Ornithology is a science and not a mere pastime alone, as too many seem to regard it. The exhibits of this branch of science in the Anthropological Building were truly wonderful, and did a great deal to show what can be done in this line by careful study and perseverance.

I wish to say just a word against the chief tyrant of our feathered visitors—the English Sparrow. It seems to me that every effort should be made to influence the legislature to pass a law offering a bounty for their death. This would quickly thin out their numbers and give us back the birds that used to be in abundance about our doors before the advent of this stranger. If all the readers of the OÖLOGIST would do what they could toward driving this bird out, we would soon be able to see a noticeable increase in the number of our own native birds.

I hope that this little article will put the matter in the right light with at least a few collectors, and that there will be more observation of the habits, and a little less collection in quantities of the eggs, of our birds.

FRED W. PARKHURST,

Bath, N. Y.

Nesting of Leconte's Sparrow.

Leconte's Sparrows are fairly numerous in the vicinity of Reaburn, Manitoba. Their peculiar note can be heard both day and night in fine weather, the only sound I can compare it to is the note of the grasshopper.

It is one of the most difficult small birds to collect that I know of. They are great skulkers, I have often followed them guided by their chirping in the grass, until I was sure the bird was not more than a few yards away, then he would suddenly "crowd on all sail" and dart away at a high rate of speed, gyrating from side to side in a manner that would test the skill of any collector.

On June 18th Mr. W. Raine, then my companion at Reaburn, discovered a small nest containing five small, speckled eggs, which we felt sure were the eggs of the Leconte's Sparrow as the birds were in the vicinity all the time, the locality was carefully noted and we visited it four or five times a day. On the morning of the 21st upon waking we found it raining, but in a short time we were cautiously approaching the nest, when within a few yards the bird flushed and by a lucky shot I knocked it over and in another moment I had in my hand the parent bird, Leconte's Sparrow.

On the 19th while walking over the prairie we almost tramped upon a small bird as it fluttered from under our feet and a short search revealed a nest containing four young birds and an addled egg, the egg corresponded exactly with the others, the nest also was identical and the glimpse we had of the bird made it doubtless that it was another nest of Leconte's Sparrow.

The nests were composed of fine grass, cup-shaped and deep, carefully concealed in the centre of a thick tuft of grass. The eggs are greenish white ground color, thickly speckled with pale ashy-brown and the average size is .65x.50.

G. F. DIPPIE,
Toronto, Canada.

TO-DAY you should either renew, subscribe or send in a new subscriber to the OÖLOGIST for '94.

SCENES FROM THE LIFE OF ALEXANDER WILSON.

—
His Second Southern Tour.

—
G. VROOMAN SMITH

IX.

Only two hundred copies of the first volume of the American Ornithology had been printed in the first edition. The very gratifying success of his recent northern and southern subscription tours seemed to warrant an additional three hundred copies. While the new edition was in press, Wilson assiduously directed his attention to the preparation of the second volume, which was completed and ready for the printer in August, but owing to delay it did not appear till five months later, in January, 1810. An enormous outlay had been necessary in order to perfect the plates, and in meeting this expense Wilson became involved in difficulties of which he never imagined. Therefore before the work on the plates and text of the third volume could begin it was necessary for him to undertake a third tour in search of subscribers and to collect information. A second southern pilgrimage was agreed upon, but this time following the courses of the Ohio and Mississippi Rivers to New Orleans. The ornithologist corresponded with his old friend and adviser, Mr. Bartram as to the best means of travel. In fact Mr. Bartram expected to accompany him on this expedition, but for some unknown reason (probably however the age of his friend would not admit of such a tedious undertaking), he was as usual, compelled to proceed alone. The account of this ornithological journey comes to us through letters written from time to time to his friends in Philadelphia, and particularly to his engraver, Mr. Lawson. His first letter is from Pittsburg and bears the date of February 22, 1810.

In the latter part of January he bade adieu to Philadelphia and departed in the direction of Lancaster at which he arrived in a few days. On arriving at Lancaster he waited on the Governor who received him civilly. The distinguished gentleman was highly pleased with the work and readily added his name to the list. Wilson was introduced to many members of both houses of the legislature, but abandoned them all in disgust, as in general he found them a "pitiful squabbling political mob" without knowing anything about the forms of legislation. The following Sunday he crossed the Susquehanna River experiencing great difficulty as he was obliged to cut his way through ice for several hundred yards. Passing on to York he paid his respects to all the literary talent in the place, without any success, however. While here he learned of a most extraordinary character, between eighty and ninety years of age, who had lived by trapping birds and animals for over thirty years. Through the kindness of an acquaintance he was driven out to see him, taking a half pound of snuff, of which he was insatiably fond, taking it by handfuls. The strange individual was a store house of information relating to woodcraft and told anecdotes of the greater part of the subjects of the first volume.

At Hanover a Judge told him "that such a book as mine ought not to be encouraged, as it was not within reach of the commonalty, and therefore inconsistent with our republican institutions." Wilson coolly took this passing of the sage's opinion and added that inasmuch as he had built such a large handsome three story brick house, that also was beyond the reach of the commonalty and therefore he was as great a culprit as himself. Wilson pointed out to the Judge the importance of science to a rising nation with so much earnestness and effect that he began to show signs of shame.

Departing from Chambersburg, February 11th he began the ascent of the Allegany mountains, whose great declivities were extensively covered with timber. On arriving in view of Pittsburgh he was much impressed with the distant view of the place. Pittsburgh was much the same dirty, smoky city then as it is at the present day. For he remarks that while yet afar off he saw the cloud of black smoke that always overhangs it. He thought Pittsburgh had a decided Birmingham aspect. The ice in the Monongahela River was just breaking up so he remained in the vicinity of the city exploring the woods till the ice left the stream. He exhibited his book with success beyond expectation, securing fourteen new subscribers. He was persuaded to make the journey by water instead of by land as the roads were impassible for a land journey. Thereupon he purchased a small boat which he very appropriately named the Ornithologist, intending to proceed in it to Cincinnati, a distance of more than five hundred miles. He procured his stock of provision, consisting of some biscuit and cheese and a bottle of cordial a gentleman in Pittsburgh presented him with. All these were stored away in one end of the boat with his trunk, gun and extra coat, and a tin vessel to bale his boat with and to take his "beverage from the Ohio."

Bidding adieu to the smoky city of Pittsburgh, he launched his bark into the stream and was soon winding his way among the hills that everywhere enclosed that magnificent river. The spring weather was warm and serene, the river like a mirror, except where a few widely scattered fragments of ice spotted the surface. His heart expanded with delight at the novelties which surrounded him. The sweet whistling of the Red-bird on the bordering banks; the smoke of the numerous maple sugar camps rising lazily among

the mountains; the grotesque log cabins that here and there opened from the woods, gave a most delightful effect to the varying landscape. The current flowed about two and a half miles an hour, but Wilson finding this too slow stripped himself with alacrity to the oar and added three miles and a half to his speed. In the course of the first day he passed a number of Kentucky boats or arks, loaded with people, horses and ploughs, flour, etc. The arks were the principal means of communication and transportation between the scattered settlements along the river. They were propelled by two huge oars at each side, and steered by a long one behind, and made about twenty miles a day. They approached a village with much the same demonstration as a stage coach nowadays does in the mountains, with loud and long trumpet blasts to announce to the inhabitants their arrival.

Our traveler left behind him fifty-two miles the first day and an hour after night fall he landed before a miserable cabin where he obtained lodging for the night. He relates that he slept on what he supposed were corn stalks or something worse, the uncomfortableness of which caused him to rise long before day break and proceed on his voyage. The early hour was delightful and as he silently swept down the smooth glassy surface of the stream the far away hideous hooting of the Horned Owl, and the first morning carol of the Song Sparrow were in harmony with the projecting headlands beautifully reflected in the placid water. In this lonesome manner, with an abundance of leisure for observation and reflection, exposed to hardships all day, and hard berths at night, to storms, rain, hail and snow he persevered twenty-one days till Sunday evening, March 17th he moored his frail bark safely in Bear Grass Creek at the rapids of the Ohio, having made in that time a voyage of seven hundred and twenty miles.

Wilson became profoundly interested in the remarkable Indian mounds in the town of Marietta, Ohio. He explored several of them and manifested much regret that he had not the time to investigate their hidden treasures. About ten miles below the mouth of the Great Scioto he was overtaken by a heavy rain storm, which soon changed to hail and snow. The fury of the tempest uprooted multitudes of trees along the bank blocking the passage and compelled him to keep his boat in the middle of the stream which he says rolled and foamed like the sea. After a desperate effort he succeeded in landing near a cabin on the Kentucky shore. The cabin was that of a man called a "squatter" an immediate successor of the Indian occupancy, who subsist by trapping. The proprietor was a veteran in the art of wood craft and Wilson listened with interest to his recital of hunting and trapping exploits. In respect to these squatter inhabitants he says that nothing adds more to the savage grandeur and picturesque effect of the scenery along the Ohio, than these miserable huts of human beings, lurking at the bottom of gigantic growths of timber, that has its equal in no other part of the United States. On nearer approach however their appearance is apt to break the charm, for they are little better than pig sties. At these habitations Wilson was obliged to remain at night or else encamp in the forest with no protection from the elements.

Our traveler reached the Big Blue Lick where the bones of extinct animals have been taken in great numbers, but at that early time comparatively little was known of the locality, and only a few bones had been found. The place is a low valley, surrounded on all sides by high hills. In the center is a quagmire of an acre in extent. Wilson nearly lost his own life in pursuing a Duck across the quagmire, into which he sank, extricating himself only by a

desperate effort. He reached Louisville in the night having been detained upon his way by a vain pursuit of Wild Turkeys, until it was so late that he was alarmed in the evening by hearing the distant sound of rapids sometime before he reached the city. He reached Bear Grass Creek; landed in safety; took his luggage on his shoulder, and groped his way in the dark to the town. From here he writes: "The next day I sold my skiff for exactly half what it cost me; and the man who bought it wondered why I gave it such a droll Indian name (The Ornithologist) 'some old chief or warrior, I suppose,' said he."

Leaving his baggage to be forwarded by wagon he proceeded on foot to Lexington, a distance of seventy-two miles. The walking was uncomfortable and the absence of bridges very inconvenient; however he was generally pleased with the appearance of the country. He was most profoundly interested in the flight of the Passenger Pigeons. They moved in immense clouds several strata in depth, extending in every direction as far as the eye could reach. He sat down to note how long this flight would continue; but after an hour there was no sign of the end, in fact they appeared to be crowding on in greater numbers. He visited one of these remarkable Pigeon roosts, experiencing much inconvenience in reaching it. The inhabitants of the vicinity assemble there in great numbers at night to kill the birds which is done by every manner of device. At certain seasons of the year wagon loads of slaughtered birds are daily taken from the roosting grounds to feed the hogs on, which it is said is a very fattening diet.

Arriving at Lexington our traveler was most surprisingly delighted with the gay appearance of the city. For many long weeks he had pursued his way through the solitude of an almost unbroken forest, and now to emerge

from the solitary forest into the busy streets of this Kentucky city was exhilarating to the fatigued senses of the pilgrim. Every where there was a notable spirit of industry. Everybody was interested in buying and selling land. The spirit of trade pervaded every avenue of business. Especially was this true of the Yankees, who, he affirms we really are traders. One particularly enterprising Yankee—a house carpenter from Massachusetts had brought down the river from Pennsylvania several barrels of apples and employed the negro women "to hawk them about the streets, at thirty-seven and a half cents per dozen."

A Kentucky horse in that day was as remarkable as now, although in a different sense. He says they are the hardiest in the world, not so much by nature, as by education and habit. For from the very beginning of their existence they are habituated to every extreme of starvation and gluttony, idleness and excessive fatigue. In summer they have the best of the land, but in winter when the fields are bare they become the very skeleton of life. In this condition they are ridden into town, a distance of twenty miles or so, through roads and sloughs, that would become the graves of any common animal, with a fury and celerity incomprehensible by any one save an inhabitant. Wilson was greatly surprised to see what a vast amount of industry and improvement had been gathered there in a few years, and Lexington with all its faults is yet an honorable monument of the enterprise of its citizens.

From Lexington he proceeded to Nashville; and here let us close this paper reserving for the next the remainder of his southern experience.

Mr. C. C. Henry of New York City writes "I enjoyed the OÖLOGIST during the past year *more* than *any* paper or magazine I have ever taken."

Collecting Live Birds.

To the genuine Naturalist, who will take the trouble to feed and take care of birds, the live birds are much more interesting and valuable for study than the mounted specimens. Although there are comparatively few species which can be captured and kept alive at a small expense.

In the last few years I have had quite a number of live birds, among them were Hawks, Barred and Screech Owls, and a large number of Crows and more common birds.

If any of the younger collectors were going to start a collection of live birds, I would advise them to start out with Crows, as they are easily tamed and will eat anything digestible by man or beast. They will also eat cuff-buttons, rings or anything of shiny appearance. Although I would not advise the use of the latter articles in the way of food for Crows. I have heard that they can be taught to talk, but I have not tried teaching them.

Next easiest to tame in my experience, comes the Owls. My last Barred Owl would set on my arm and let me pet him. My Owls would eat nothing but meat. I let the Screech Owls (last summer I had eight in number) loose in the barn to live on mice; only giving them a few English Sparrows or a piece of beef steak once a week for a change of diet.

My only specimen of Black Hawk did not become tame enough to handle, but would eat meat from my hand. He is now a "stuffed bird."

While hunting I captured a young Sora Rail; he graced my collection for about a month, when one night he made a fatal expedition through the bars into the next cage which contained some Barred Owls. A few feathers scattered about the cage told his sad end.

A friend of mine tried keeping Prais-

rie Hens, but after a short time they either all died or escaped. I have never heard of anybody keeping them in captivity with any success. Mr. Studer in his "Birds of North America" speaks of keeping Bob-whites with success for several seasons.

Some of our birds, among them the Woodpeckers, will die if kept in captivity.

The only instance in my experience of wild birds nesting in captivity, was last Spring, a Screech Owl laid a set of four eggs, which are now in my collection.

I generally start collecting live birds (also the smaller animals and snakes) about April first and in the latter part of September, I either convert into skins or set free my "menagerie," excepting the very tame ones which take up quarters in the barn for the winter.

WALTER A. JOHNSON,
Galesburg, Ills.

Accidental Death of Birds.

In one of our well known ornithological publications there appeared recently an interesting article on "The Accidental Death of Birds," in which the writer tells of a number of cases that came under his observation in which birds had lost their lives by purely accidental causes.

Having met with several such cases in my own experience, and thinking they might possibly be of interest to some of the many readers of the OÖLOGIST, I send them in.

One autumn, several years ago, while wandering over a collecting field of previous seasons I found the remains of a song sparrow and its nest, the bird had used some string in building the nest and in this had become so entangled that it was unable to regain its freedom, and had consequently died, evidently from starvation.

I remember a case of accidental death that occurred to a family of young Yel-

low-shafted Flickers some years ago. The young Flickers were about a week old and resided in a large venerable willow tree. One afternoon there was quite a storm, the wind blew lustily over-turning the old tree, and very unceremoniously tossing the young Flickers out upon the ground. As the fall had apparently done them little or no injury a section of the tree containing them was cut out and stood up against a fence, near where the old willow had grown, in the hope that the parent birds would return to the young, but they did not and in a few days the young Flickers died. Artificial feeding was tried but it apparently did not do any good. Without a doubt large numbers of young birds and eggs are destroyed by the wind blowing the nests out or the trees down, and I think we have all in our tramps through field and forest found many young birds and broken eggs upon the ground that have been thus destroyed. If the eggs of a season that are in this manner lost could be preserved they would doubtless make a collection of which any oölogist might well be proud.

During the latter part of last spring and in early summer the wind played havoc among our trees and consequently among our birds. I remember walking out one day after such a storm, and finding the remains of no less than a dozen different nests with eggs that had been thus destroyed.

DR. W. E. ROTZELL,
Narberth, Pa.

Maryland Birds That Interest the Sportsman.

All the Ducks, Geese and Swans are migratory. Among what is known as the "Shore Birds" are many small ones that are frequently bagged along with the larger; but in the following list I have only included those which are principally sought after.

The land "Game Birds" are largely

hunted not only by the legitimate sportsman hunting for the love of sport, but also by the pot-hunter, who seems to use every means within his power to exterminate the birds as fast as possible. Two of these latter living in this city, have been going out at night after Bob-white and on the dogs "pointing" the roosting covey, they have secured them all at a single discharge of the gun.

Merganser americanus, American Merganser. This species and the other Mergansers are often shot by the duckers and sold in market under the name of "Fishermen." They have a rank, fishy taste.

Anas boschas, Mallard. One of our first Ducks to arrive in the fall migration, and is generally shot in the marshes. The male is a beautiful bird and is sometimes called "Green-head."

Anas obscura, Black Duck, Dusky Duck, Marsh Mallard, etc. This is another of our marsh Ducks, more common in the salt marshes. August 28, 1893, a young female was shot on Lake Roland, Baltimore county.

Anas strepera, Gadwall, Gray Duck. Sometimes killed by the duckers.

Anas penelope, Widgeon. Several of the European Widgeon have been recorded from Maryland.

Anas americana, Baldpate, Widgeon. This Duck is one of our early arrivals, and makes good shooting, but at times they are very high flyers. They are a good table Duck.

Anas carolinensis, Green-winged Teal. Not so common as the following species, and more often killed over decoys in the open water.

Anas discors, Blue-winged Teal. This is the first Duck to arrive in the fall, and is found in the marshes and about the heads of Gunpowder and Bush River. During August and September many are killed by the gunners, who are after Sora and Reedbirds.

Defila acuta, Pintail, Sprigtail. Often shot over decoys.

Aix sponsa, Wood Duck, Summer Duck. The only Duck that breeds with us regularly. The male is the most gandy of all our Ducks. This species is often called Acorn Duck, and from its habit of nesting in hollow trees is sometimes called Tree Duck. It is found in the marshes and on streams bordered by woodland.

Aythya americana, Redhead, Pochard. Years ago when Bush and Gunpowder Rivers were full of wild celery (*Valisneria spiralis*) we had splendid shooting, and the Redhead was abundant. Of late years this grass has been killed out and the Ducks have been scarce. Still, on March 5, 1887, my uncle and I shot ninety-eight in less than three hours. They sometimes stop on border of inland water during migration. Some years ago about six hundred spent the day on Lake Roland, one of our water supplies situated seven miles from the city.

Aythya vallisneria, Canvas-back. This, the finest of our Ducks, like the preceeding species is gradually disappearing from our rivers; its principal food (*V. spiralis*) being almost entirely gone. When feeding on this grass a fine, delicate flavor is imparted to their flesh and they bring a high price in market, at times as high as \$10 per pair.

It is one of our best decoying Ducks. If one makes up its mind to come to the stools it is bound to get there.

Aythya marila nearectica, American Scaup Duck, Raft Duck, Shuffler, Bay Blackhead, etc. The Blackhead is a common Duck in our rivers and in Chesapeake Bay. It decoys well and is a good table Duck, but not so highly esteemed as some of the other species It often associates with the Redhead.

Aythya affinis, Lesser Scaup Duck, Little Blackhead, Creek Blackhead, etc. Much smaller than the preceding species. Decoys well. I have killed a great many on Dundee Creek.

Glauconetta clangula americana, American Golden-eye, Jangler, Whiffler, Whistler. Common; killed over decoys; named Whistler from the sound made by its wings while flying. Often while in the blind half asleep I have been aroused by the sound of their wings.

Charitonetta albeola, Bufile-head, Butter-ball, Dipper. These little Ducks are often found on inland lakes. I have several times seen them on Lake Roland. They are very difficult to shoot while on the water as they dive at the flash of the gun. For this reason some call them "Hell Divers."

Clangula hyemalis, Old-squaw, South Southerly, Long-tailed Duck, etc. Common and trashy; often shot over decoys while watching for better game.

Oidemia americana, American Scoter. This and the other Scoters are sometimes killed, but they are not fit for the table. Often called Tarpots, Sea Coots.

Erismatura rubida, Ruddy Duck. The Coot, as it is commonly called by our gunners, is a fine little table Duck. It does not often decoy, but will frequently swim into the stools. I have sometimes been shooting Ducks from the P. W. & B. rail road bridge over Gunpowder River, during a perfectly calm day, when the surface of the water below the bridge was covered with large "rafts" of these little Ducks. If a breeze would ruffle the water they would arise singly and in small flocks, sometimes flying up the river and raising just enough to clear the bridge they would pass within a few yards of me with the velocity of an arrow. Under such circumstances I once saw a man shoot away two hundred shells and only bag a single bird.

Chen hyperborea, Lesser Snow Goose. Rare; I have only seen it on two occasions, March 10, 1890 and in October, 1890. In the latter case I was fishing from the rail road bridge over Bear Creek and a pair flew directly over me, about forty yards high.

Anser albifrons gambeli, American White-fronted Goose. Very rare; only a few ever having been recorded in Maryland. November 12, 1892, my uncle shot one over Duck decoys on Gunpowder River. It was alone at the time. It was mounted and is now in the Maryland Academy of Sciences, this city.

Branta canadensis, Canada Goose. Very common during the migrations. Many are killed at the shores at the mouths of our rivers and along the Bay shore. I have seen large numbers off Legoe's Point at the mouth of Bush River.

Branta bernicla, Brant. This is more of a maritime bird and remains along the coast.

Olor columbianus, Whistling Swan. Common in Chesapeake Bay, often ascending its tributaries. I have seen large flocks bedded in the Bay off Legoe's Point, where many are killed at times. March 14, 1893, I saw a flock of six in Gunpowder River, where they remained within a radius of about two hundred yards all day. They are sometimes killed on the Potomac as high up as Harper's Ferry. November 6, 1893, several flocks were on the Potomac opposite Brunswick.

Rallus elegans, King Rail, Fresh-water Marsh-hen. Often shot in the fresh water marshes by gunners when after Reedbirds, etc. It is resident in summer and I have taken two sets of its eggs.

Rallus crepitans, Clapper Rail, Salt-water Marsh-hen, Mud-hen, Sedge-hen, etc. Migratory; abundant in the salt marshes along the Atlantic coast, where it breeds in immense numbers. I have seen numbers of them floating about on the "drift" during a high tide.

Rallus virginianus, Virginia Rail. Migratory; not common; sometimes shot in the marshes.

Porzana carolina, Sora, Carolina Rail, Oortolan. The Rail, as it is commonly called, is very abundant in our fresh

water marshes during the fall migration in August and September. On the marshes at Marlboro and Nottingham it is not an unusual thing for a single man to bag from 250 to 300 birds a day. At this season they are very fat, and are highly esteemed for the table.

Colia americana, American Coot. This bird is often shot and sold in market as the Crow-bill Duck. They are poor eating being rank and fishy. Migratory.

Philohela minor, American Woodcock. Migratory as a rule, but resident during mild winters. They begin to breed very early and on the nest are exceedingly tame. They frequent low wet woodlands, and except for the flies and hot weather make very enjoyable shooting in July, the more so from the fact of their being the only game to shoot at the time. Their flight when flushed is rapid, but after flying a few yards they will drop. They can be flushed several times before taking a longer flight.

Many Woodcock are killed by flying against telegraph wires; several times I have found them on the ground between the poles.

In the spring while mating they have a curious way of ascending in the air, uttering a peculiar note at the time. One moonlight night in March while I was after Muskrats I heard the Woodcock all about me, and at times they would alight on the sandy soil within a few yards of me.

Gallinago delicata, Wilson's Snipe, Jack Snipe. The Jack Snipe is a common spring and fall migrant, most abundant in the spring.

When flushed they utter a peculiar note resembling *scaip*, *scaip*, and the first few yards of their flight is zig-zag, making a difficult shot at the time.

They are found in the river marshes and in wet meadows, seldom where there are trees. Sometimes when abundant, dozens will flush at the re-

port of a gun, circle all around uttering their peculiar note, and then scatter all over the marsh. As the Snipe is often very wild and flushes against the wind the best plan is to hunt them with the wind, so in rising they will give a closer shot. They feed like the Woodcock by thrusting the bill into the mud.

Macrorhamphus griseus, Dowitcher, Gray-back Snipe. The Gray-back, as it is generally called, used to be very abundant and in large flocks, being found in the marshes and on the mud flats along our sea coast; of late years they have been scarce. They are unsuspecting birds and readily decoy. After having several shots fired into their midst they can be immediately whistled back again to the decoys. They are migratory, most abundant during May and August.

Tringa canutus, Knot, Robin-breast Snipe, Robin Snipe. The Robin-breast is at times abundant along the coast during the spring and fall migrations, generally being killed on the ocean side of the beach, they, as a rule, keeping along the surf. They are a handsome bird, and in my opinion the finest of our shore birds for the table.

Tringa alpina pacifica, Red-backed Sandpiper. The Black-breast, as it is often called, is smaller than many of the other shore birds, but is generally bagged when it comes to the decoys, spring and fall migrant.

Limosa fedoa, Marbled Godwit. Migrant; usually called Straight-billed Curlew. Shot on the marshes along the coast.

Totanus melanoleucus, Greater Yellow-legs, Yellow-leg Plover, etc. An abundant migrant in our salt water marshes, sometimes taken far inland. August 26, 1893, I saw one at Loch Raven, twelve miles from Baltimore. They decoy well and are good eating.

Totanus flavipes, Yellow-legs. Spring and fall migrant. It is often called Little Yellow-leg Plover. More of an

inland bird than the larger species, and is often killed on our fresh water marshes. During August 1893, about a dozen remained for some time at Lake Roland, Baltimore Co.

Symphemia semipalmata, Willet. The Willet is a summer visitor, and breeds in the marshes along our coast near Ocean City. While shooting other shore birds in the spring, the Willet should be spared and is to a great extent. In August they make fine sport, decoying readily. They are shot both on the sea-side and in the marshes.

WM. H. FISHER,
Baltimore, Md.

[Concluded next month.]

Western New York Naturalists' Association.

A special meeting of the Western New York Naturalists' Association will be held in the rooms of the Y. M. C. A. Building, Cor. Court and St. Paul Sts., Rochester, N. Y., March 17, 1894.

The business meeting will be called at 1 p. m., sharp, at which all active members are urgently requested to be present. From 3 to 5 p. m. the rooms will be open to the public for the examination of exhibitions of specimens. At 8 p. m. there will be a public meeting for the presentation and discussion of scientific papers on different branches of natural science. It is earnestly requested that all members be present, and contribute, as far as possible, towards making this meeting one of great interest to all.

All out-siders interested in natural science, are cordially invited to be present and contribute to the presentation and discussion of papers, specimens, etc. All who can be present or contribute are requested to communicate with the chairman of the Arrangement Committee, stating the title and length of papers to be presented, and enumerating the specimens they will exhibit. It is earnestly hoped that large contributions will be made to the exhibit by members and others interested and that all will come as early as possible, to allow ample time for the arrangement of specimens.

B. S. BOWDISH, Chairman.
L. V. CASE,
E. H. SHORT,
Arrangement Committee.

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FEBRUARY CONTEST—Was decided and the prizes mailed the winners on March 1st, the result in detail will be given in April OöLOGIST.

During 1894, as in 1893, the Publishers of the OöLOGIST will distribute over \$300 worth of desirable prizes among the patrons, contributors and readers, of the OöLOGIST. Particulars in full next month.

Dr. L. B. Bishop of 77 Whitney Ave., New Haven, Conn., desires information regarding the occurrence of albinistic or unspotted eggs in species generally laying pigmented ones, also abnormally colored ones in species whose eggs are usually white or immaculate. The Dr. is making a study of the subject and we trust our readers will provide him with all data on the same in their possession.

Mr. Egbert Bagg, 191 Genesee St., Utica, N. Y., desires information as to the disappearance of the House Wren or the Purple Martin, or of their return after disappearance, the cause if known, the dates and any other information on the subject. All readers of the OöLOGIST are invited to communicate with him, if it be only to say, that the bird is not known in their locality. (The district especially desired to cover is Central and Eastern New York, but information from anywhere is welcome.)

You Are a Judge.

Your decision must be mailed us not later than the *first* day of April. Write on back of a postal card the five articles which *you* have decided to be the *most valuable, instructive and interesting* in this number of OöLOGIST and mail to us. Number the articles in the order which you think the prizes should be awarded.

We give our Judges five prizes having an aggregate value of over \$5. one to each of the five whose decisions are nearest the final award of Mss. prizes.

January Contest.

In January OöLOGIST our Annual Index and "OöLOGIST's Exhibit of Birds Eggs at the World's Columbian Exposition" occupied so much space that there was really not enough competition for an Article Contest.

However, as we made no announcement to the contrary—eighteen of our patrons sent in their decisions.

The First Prize was awarded "Raptores of Michigan" and to each "A Collecting Trip in Florida" and "Western Warbling Vireo" we mailed a part of "Maynard's Birds of Eastern North America." To each of the eighteen Judges we presented a copy of the "Standard Catalogue".

All prizes were mailed Feb. 13th.



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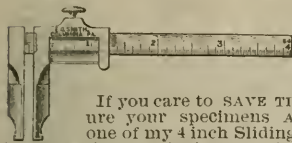
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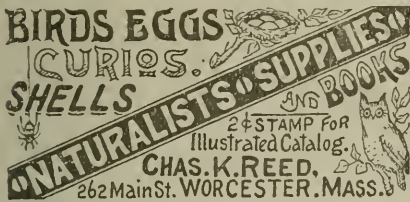
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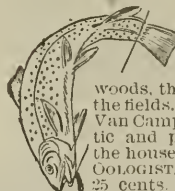
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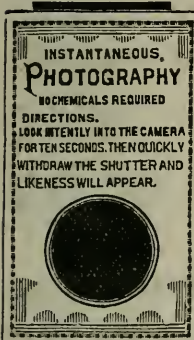
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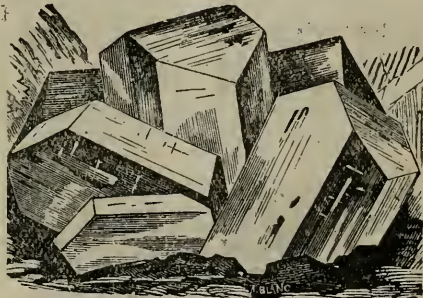
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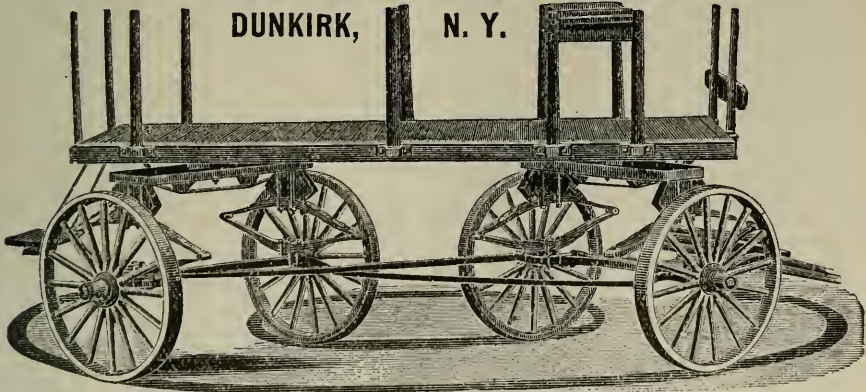
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6 White Murex (20)	37	3 E. I. Clams (1.00)	1.00
6 " (50)	1.00	6 Ger. Land Snail (15)	42
3 Black Murex (25)	40	6 Strombus Vittatus (15)	36
6 Hooked Scorpions (35)	1.00	6 Boxes mixed shells (25)	50
6 Melons (50)	1.20	1 Qt. Olive Shells (05 each)	40
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6 Black Ears (25)	50	6 W. I. Starfish, large (50)	1.20
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6 Magpies (25)	50	3 Pacific " (25)	37
10 Pelican Foot (05)	12	1 Sea Beaver (75)	35
6 Murex trunculus (10)	21	1 " Biscuit (75)	35
3 Milk Stromba (25)	20	2 Sand Dollars (10)	06
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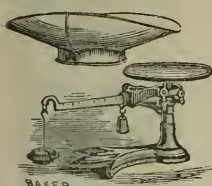
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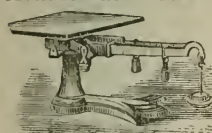
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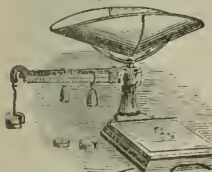


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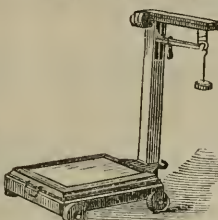
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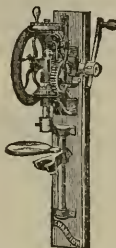
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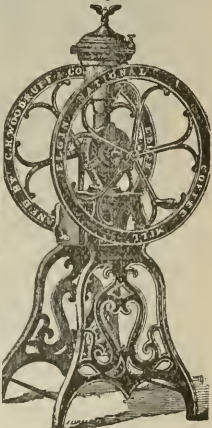


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
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| feathered Spaces in Birds, 2 fig | Birds. 2 fig. | and Feet. 4 fig. |
| 9 Skeleton of an Eagle. | 29-31 Forms and Attitudes of | 69 Sewing up the Opening Cut |
| 10 Skinning a Bird, 9 fig. | Birds. 51 fig. | in Heads with Horns, etc., etc. |
| 11 Returning the Skin over the | 40 American White-fronted | 10 fig. |
| Skull. | Goose, in Thread Winding. | 70 Designs for Center-boards in |
| 12 Adjusting Feathers of the | 41 Greater Yellow-legs, in Step- | Heads, etc. 4 fig. |
| Head. | ping Attitude, &c. | 71 Finished Mammal Heads in |
| 13 Mounting a Bird, 14 fig. | 42 Cooper’s Hawk. | rage, with mouth oper. 4 fig. |
| 14 Wiring and Poisoning the | 43 Oological Instruments, etc., | 72 Mounted Dog Heads. 7 fig. |
| Tarsus. | etc. 9 fig. | 73 Buffalo Head. |
| 15 Finishing a Mounted Bird, | 44 Skinning Small Mammals. | 74 Head of Big-horn Sheep. |
| &c. 5 fig. | 6 fig. | 75 Caribou Head. |
| 16 Winding the Plumage of | 45, 46 Wiring Small Quadru- | 76 Elk Head. |
| Birds, 3 fig. | peds. 7 fig. | 77 Moose Head. |
| 17 Removing Owl’s Eyes, etc. | 47 Sewing up the Opening in | 78 Steer Heads. |
| etc., 8 fig. | Small Quadrupeds. 6 fig. | 79-80 Skinning and Mounting |
| 18 Breast-cut Method of Mount- | 48 Skins of Quadrupeds. 2 fig. | Tortoise, Snakes and Fishes. |
| ing Birds, etc., 7 fig. | 49 Skeleton of a Greyhound. | 10 fig. |
| 19 Variations and Exceptions | 50 Superficial Muscles of the | 81 Wiring in the Frog. |
| in Skinning Birds, 7 fig. | Horse and Dog, etc. 5 fig. | 82 Wiring in Crustaceans. 4 fig. |
| 20 Legs, Wings, etc., etc., 4 fig. | 51 Diagram for Obtaining Meas- | 83 Skeletonizing and Mounting |
| 21 Mounting Birds with Spread | urements of Large Quadrupeds | a Turtle. 3 fig. |
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| Long-necked Birds, 5 fig. | Manikin and mounting a Grey- | 85 Quail Group with Painted |
| 23 Framework of the Ostrich. | hound upon the Dermoplastic | Background in Convex Glass. |
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| | the Elephant. | 87 Wounded Black-backed Gull. |
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EDWIN E. HOWELL, 612 17th St., Washington, D. C.



THE OöLOGIST.

Monthly. 50c. per Year.

VOL. XI. NO. 4.

ALBION, N. Y., APRIL, 1894.

WHOLE No. 102

Wants, Exchanges, and For Sales.

Brief special announcements, "Wants," "Exchanges" "For Sales," inserted in this department for 50c per 35 words. Notices over 35 words, charged at the rate of one cent per each additional word. No notice inserted for less than 50c. Terms, cash with order.

"DEALERS" can use these columns at *Regular Advertising rates, only.*

Strictly First-class specimens will be accepted in payment at one-half list prices.

Exchange Cards and Coupons (subscription) will be accepted for "Wants" and "Exchanges" *only* and according to conditions stated thereon.

TO EXCHANGE.—Specimens of Fossil Palms, Ferns, Leaves from Coal Mines of N. E. Penna. for Fossils, Indian Relics or Minerals. H. MYERS, Archbald, Pa. A-M

TO EXCHANGE.—Autoharp with music, silver postage stamp case, and painted plaques for eggs, sets or singles. L. F. HEAPHY, 104 E. 26th St., N. Y. City.

CENTURY MAGAZINE, Complete set of new issue, bound in publishers old gold cloth, like new. Will sell for the price of binding \$1 a Vol. or will exchange at \$2 for rare sets, well authenticated. EGBERT BAGG, 191 Genesee St., Utica, N. Y.

SCREW Cutting Foot Lathe, 7 $\frac{1}{2}$ x 30 inch swing, with swivel raising rest, chuck with two sets jaws, three face plates, centre-rest, drill pad, fork-centre, all in first class order. Price \$50. Address, F. H. JACKSON, Angelica, N. Y.

LOOK! Forty copies, Journal of Education, twenty South Dakota Educators, fifteen The Teacher's Institutes, eleven School Journals, all in good condition, a few pieces cut out of the first two sets. To exchange for best offers of petrified woods, fine minerals and fossil ferns, or Indian relics. Fifteen good ungrooved or lightly grooved flint stone tomahawk heads to exchange at forty cents apiece. GEO. W. DIXON, L. Box 281, Watertown, S. D.

NOTICE! I will pay the following cash prices for lightly cancelled Columbian Stamps: 1c, per 100 10c; 2c, per 100 5c; 3c, per 100 \$1; 4c, per 100 50c; 5c, per 100 50c; 6c, per 100 \$2 50; 8c, per 100 \$2; 10c, per 100 10c; 15c, each 8c; 30c, each 15c; 50c, each 30c; \$1, each 60c; \$2, each \$1; \$3, each \$2; \$4, each \$3; \$5, each \$4. Stamped envelopes 1c, per 100 entire 10c; 2c, per 100 entire 30c. If cut square $\frac{1}{2}$ the above prices. I will remit promptly for all stamp s. Address W. C. PICKENS, Livingston, Ala.

"Enclosed find postal note for \$2.91 in payment for ad, and also for renewal of my subscription to the OöLOGIST. Would say that the last exp. notice in your paper brought *more answers* than I needed. Wm. Rolfe, San Bernardino, Calif.

MOUNTED Specimens and skins for scientific purposes. A. M. NICHOLSON, Orlando, Florida.

STAMPS on Approval.—40 per cent. Commission. 50 varieties stamps including Japan 10c, 100 varieties including Siam 15c, 200 varieties including Monaco and Hayti 50c, 7 varieties Ecuador unused 10c. MECKER-TOWNE STAMP CO., P. O. Box 296, Bridgeport Ct. A3t

SEND \$1 (and 20 cts silver) and receive post-paid a Blue Jay, Bronzed Grackle or any common bird, same size mounted (on perch) by Violet S. Williams, who sent the only collection of mounted specimens admitted to the Woman's Building at the Columbian Exposition. *Fresh* specimens sent two or three weeks after receiving order. Address, MRS. VIOLET S. WILLIAMS, Coralville, Johnson Co., Ia.

STUFFED and live Alligators, Tarpon Scaler, Mounted fishes, Florida curios, in exchange for Collecting Gun, Rifle or BB Cornet or Manual of North American Birds. Send me list of what you have for exchange and get mine. Address, FRED STEENSGAARD, Taxidermist, St. James City, Fla.

FOR SALE or Exchange. Telescope, cost \$3; 29 bar chromatic xylophone \$5; 3 fine figures for Punch and Judy show \$1. Will take \$6 cash or \$4 in curiosities. A. RIGLING, 201 South 12 St. Philadelphia, Pa.

"Enclosed please find Money Order for \$1.80 for which please insert the enclosed advertisement in the OöLOGIST for three months beginning with April number. Ad. in this month's issue has proved the value of your paper as an advertising medium and we cannot recommend it to highly to advertisers." Mecker-Towne Stamp Co., Bridgeport, Conn.

WE HAVE a Job Lot of gold and silver plated charm rules, a few are slightly tarnished. We have less than 25 all told and until sold we will mail them prepaid at the following low rates: Silver Plated 10c, regular price 50c; Gold Plated 15c, regular price 75c. F. H. LATTIN & CO., Albion, N. Y.

TO EXCHANGE.—1 new 22 caliber, single shot Davenport Rifle. Price \$7. for Coues' Key in fine condition. Must be in fine condition. Address HUGH S. CAMPBELL, El Paso, Ill.

A FINE ivory headed 6 keyed Meyer piccolo, plush lined leather case, cost \$10. almost new, for best cash offer not under \$4.50. GEO. E. BALDWIN, St. Johns, Mich.

FOR EXCHANGE.—Fine California birds and eggs. Strictly first class specimens given and desired. Desirable species wanted. Lists exchanged. F. I. ATHERTON, Los Gatos, California.

BRACHIOPODS.—First-class specimens (scientifically labeled) to exchange for entomological instruments or supplies. Guaranteed cocoons of *Cecropia* and *Prometheus* for other species. Satisfaction guaranteed. Address: C. E. CUMMINGS, 590 Auburn Ave., Buffalo, N. Y.

I HAVE eggs of the Great Horned and Barred Owl. Red-tailed and Cooper's Hawk to exchange for good Indian relics also for good eggs. JASPER BROWN, Norway, Ia.

CALIFORNIA Birds and Eggs.—Extra fine skins and mounted birds at bedrock prices. Mounted collections furnished on short notice at great discount. Eggs in sets for sale cheap. Send stamp for price lists. Satisfaction guaranteed. F. I. ATHERTON, Box 60, Los Gatos, California. A2t

FOR EXCHANGE.—Wanted to exchange Baltimorean No. 10 self inking printing press with all appliances; full line of chemicals; induction coil, batteries, bels, push buttons, etc. for eggs, revolver or cash. Correspondence of parties collecting eggs also desired. All answered. GEORGE GALLAGHER, JR., West New Brighton, Staten Island, N. Y.

TO EXCHANGE.—Some five and ten cent stamps of 1847 issue (rare) for Indian relics or eggs, also 3 or 4 years of Leslie's Popular Monthly. LON L. SMITH, 20 Gibson St., Canandaigua, N. Y.

TO EXCHANGE.—An A1 Detective camera, Printing press, racing skates and cigarette maps and cards, for two, 32 cal. revolvers, two bowie knives, Oologists supplies, and a 92 or 93 model Columbia bicycle saddle. For particulars write to, CHAS. F. HEPBURN, Park Ave. Hotel 32d-33d St., New York, N. Y.

TO EXCHANGE.—Mounted birds, animals, game heads, antlers, skins of mammals and birds or anything in our line for 5x7 folding camera and double barrel breech loading shot gun suitable for ducks and geese. We have in pickle and for sale, fine skins of cow, moose, ant. sheep, antelope and red fox. WM. HOWLING & SON, Taxidermists, Minneapolis, Minn.

BIRDS Eggs, skins, firearms, stamps, and books to exchange for eggs and mounted birds. Want to exchange eggs obtainable here for eggs of other localities. Will buy Coues' Key and other books on Ornithology if cheap. S. VAN RENSSELAER, JUN., West Orange, N. J.

TO EXCHANGE.—Old numbers of Harper's Magazines about 100 for Old Flint Lock Musket, Flint lock Horse Pistol, Navy Cutlasses Sabers, Rapiers, Indian Relics, Shells, Birds Eggs or any other curios. Write what you have. L. L. SMITH, JR., 20 Gibson St., Canandaigua, N. Y.

U. S. STAMPS for collection wanted in ex. for \$8 worth of eggs in full sets with data. H. LAFLER, Albion, N. Y.

GREAT Bargain. To exchange eggs in sets and singles from Kansas, collectors from other localities please write, satisfaction guaranteed. E. R. SMITH, Imaes Kansas.

STAMPS, Arrowheads and Eggs for Fossils and Eggs in sets not in my collection. Would like to exchange sets this season. Write CLAUDE B. HARRIS, Russellville, Ind.

TO EXCHANGE 100 end blown birds eggs for Coues' Key or best offer. JOHN O'CONNORS, 387 Blatchley Ave., New Haven, Conn.

NOTICE.—First-class Calif. bird skins for sale cheap. W. H. HILLER, 147 W. 23d St., Los Angeles, Calif. Please mention Oölogist when writing.

FOR SALE.—Over \$16 worth of Singles, 28 varieties, 115 specimens. Purchaser will receive a good set, with data, gratis. Cash price \$3. Address. L. W. BROKAW, Salinas, Calif..

FLINT SCRAPERS.—Consisting of Red and Gray Flint, found in deposit, nice specimens, supply limited, 3 for 25c. postpaid. Address, HARRY B. MAPLE, Columbus Grove, O.

FOR SALE.—Stevens' 32 cal. rifle in good condition. Will sell cheap, write for particulars. D. B. LORD, Deep River, Conn.

FIRST-CLASS Marbled Murrelet skins to exchange for U. S. Confederate and Foreign Postage Stamps, Taxidermist Tools and books on Natural History. GEORGE L. ALVERSON, P. O. Lock Box 232, Fairhaven, Whatcom Co., Washington.

FREE COPIES! The *Nidologist* for March is a great number, many interesting articles on collecting and bird life, with beautiful "half tone" illustration, including a page illustration of Golden Eagle's nest. We want you to see what a fascinating magazine the *Nidologist* is, therefore, for this one number we will send samples free on application. H. R. TAYLOR, Editor and Publisher, Alameda, California.

I HAVE a collection of Hawks and Owls eggs valued at over \$250, containing, among other rare sets, a fine series of 20 Mississippi Kites in sets, all taken by my collector in Southern Kansas, also 1-5 White-tailed Kite, 3-2 Sharp-shinned Hawk, etc. Complete authentic data with all sets. I will sell at 1-5 catalogue price, any eggs not satisfactory may be returned and money refunded. This collection contains about 65 sets and over 225 eggs, all Hawks and Owls. The Kite's eggs alone are worth over double what I ask for the whole collection. Correspondence solicited. W. B. PORTER, Berwyn, Cook Co., Ill.

TO EXCHANGE.—Arrowheads for fine large showy Minerals, an Emu's egg, fine Fossil Ferns polished (one side), Agates and a Humming Bird's Nest and two eggs. I also want two extra nice White Quartz War Club Heads, a Copper Ax, Hatchet and Knife, and an Iron Tomahawk. Will give extra good exchange in minerals, fossils, shells or other Indian Relics. Dictionary of American Politics priced at \$1.25. World of Knowledge, 1.50 and Hinsdale's American Government \$2, all brand new to exchange for above or other fine Indian Relics. GEO. W. DIXON, Watertown, S. D.

When answering advertisements, always mention the "OÖLOGIST."

I WILL exchange good foreign and U. S. stamps for U. S. stamps not in my collection. Send your sheets and I will do same. R. M. BOOTH, 1130 E. Monroe St., Springfield, Ills. C. I. P. S., 7, Trustee.

TO EXCHANGE.—A Quackenbush 22 cal. safety rifle, 32 cal. Smith & Wesson revolver, 32 cal. Forehand Arms Co. revolver, will exchange for coins, stamps, bird skins insects or a good microscope. R. W. PRATT, Parker, S.D.

TREE CLIMBER'S with spring steel clasps instead of straps, great scheme will sell for \$3 cash or \$5 worth of sets, Indian relics or curios. CLARENCE H. WATROUS, Chester, Middlesex Co., Conn.

FOR EXCHANGE.—Books on travel and adventures, for eggs specimens or books on Ornithology. W. S. PASK, 1415 M¹/₂, Galveston, Texas.

ODELL Type Writer in good order, cost \$15. to exchange for good Microscope. B. L. Shotgun, Sea shells, Camera or offers. Write, FRANK STUART, Ritzville, Wash.

TO EXCHANGE.—30 foreign stamps, all different for cents "coined before 1837," 40 foreign stamps all different for 1/2 cent pieces. Coins must be in good condition. E. J. GARLOCK, 1602 W. 30 St., Des Moines, Iowa.

I AM prepared to collect all kinds of Oregon eggs, with full data, and small hole at catalogue prices, in exchange for shells. REY STRYKER, Milwaukee, Oregon.

TO EXCHANGE.—90 Foreign and U. S. coins, value \$3. First class sets of A. O. U. 339 1-3 1-2, 511 1-4 1-3, 390 1-6, 77 3-2 5-1, 483 2-4 2-3, 766 2-4, 507 1-6, 263 1-4, 735 1-5 1-4 and 35 singles. Write 420 1-2, 375 1-3, 336 1-2 and other sets. FRED N. SINCLAIR, Skaneateles, N. Y.

I WISH to correspond with all advanced collectors wishing first-class skins or sets from Southern California. Send "want" lists. EVAN DAVIS, Orange, Orange Co., California.

FOR SALE.—A few choice sets of Mallard, Teal, An. Bittern, etc., cheap for cash. Orders booked for 1894 collecting, correspondence solicited. FRANK HARRIS, LaCrescent, Minn.

ELK and Moose Antlers. Fine specimens of Montana Ores and Minerals for U. S. and Foreign Coins, Fractional Currency and Autographs of Famous People. F. NELSON, 123 S. Main St., Butte, Mont.

TO EXCHANGE.—Two single action 32 calibre revolvers worth \$2 each, for best offer in eggs, stamps, books, or curiosities. DONALD CURRIE, 1505 West Lake St., Minneapolis, Minn.

I WILL sell Florida eggs this season at 1/2 catalogue rates. On orders over \$3, 15 per cent. discount. Sets or Singles. Write for list R. W. WILLIAMS, JR., Tallahassee, Fla.

WANTED.—All Columbian stamps used above 2c. Will give in exchange first-class eggs, sets or singles. Will allow face value for 3, 6 and all over 10c. WALTON MITCHELL, 534 Summit Ave., St. Paul, Minn.

MAGAZINES.—Eight volumes of Century, six vols. Forum, six vols. Outing all bound in half leather. (War articles and Life of Lincoln). Exchange for Indian relics, curios or good minerals. Quality considered above quantity. F. M. MUHLIG, Joliet, Ill.

FOR SALE.—A fine canvas canoe, built last July. Has been in the water only a few times. For only \$5. Write quick, CHAS C. SWISHER, Tunkhannock, Pa.

STAMP COLLECTORS. Send 10 cents for our really fine mixture of 300 foreign stamps. Send in order at once. The STAMP ASSOCIATION, Irving Park, Ill.

FOR SALE.—Collection of stamps, catalogued at \$135. Remington 22 rifle in good condition \$3.50. Five drawer Egg cabinet \$3. Live Chameleons, fifty cents per dozen. Address, A. B. BLAKEMORE, 280 St. Andrew St., New Orleans, La.

WANTED.—Hornaday's Taxidermy. Ridgway's Manual and "Hawks and Owls of the U. S." Will give big exchange in skins of White Pelican, Ducks and Owls, also eggs in singles and sets. Address, B. H. BAILEY, 402 A Ave., Cedar Rapids, Iowa.

I HAVE a beautiful 22 cal. Remington rifle (including canvas case), latest model, in perfect condition; valued at \$8.50, which I will sell for highest cash offer. PAUL RUSHMORE, 109 Cambridge Place, Brooklyn, N. Y.

TO EXCHANGE.—For Indian relics, coins or fossils, a collection of marine specimens. Write for particulars. T. W. THORNDIKE, 22 Newbury St., Boston, Mass.

SETS of Hummingbirds eggs with nest and data for 5c. Sets and singles to trade for Coues' Keys, Ridgway's Manual, Maynard's Eggs and Davie's Egg Check List. Sets and singles sold at half price. W. B. JUDSON, 531 Eldorado St., Pasadena, Cal.

WILL Trade or Sell for best offers, Field Camera. (good condition) with tripod plates (7x8) and complete outfit for making photographs, cost \$20, will sell for less. Also mounted Jack-rabbit, Mink, Butcherbird or any bird or small animal obtainable in my locality. W. W. SHELLY, Taxidermist, Hesston, Kansas.

WILL GIVE Florida Cormorant 1-4 for Gull-billed Tern 1-4; English Moorhen 1-4 for Forsters Tern 1-3; Green Finch 1-5 for Long-tailed Chat 1-4. F. A. PATTON, Drawer 35, Hamilton, Canada.

OF INTEREST to Stamp Collectors.—600 different cheap sets for sale; for instance 6 Chili 5c.; 4 Costa Rica 3c.; 6 Ecuador 5c.; 5 Guatemala 5c.; 6 Hong Kong 7c.; 7 Japan 5c.; 3 Liberia 12c.; 5 Salvador 1c.; 8 Samoa, current issue, 50c. and many others. Send for full price list. W. SELLSCHOPP & CO., 108 Stockton St., San Francisco, Cal. A3t

WANTED.—Hand Printing Press, Chase not less than 4 1/2 x 7 1/2 with a few fonts of type, etc., in exchange for rare eggs in sets and singles, nice collection of sea shells, books on Natural History, etc. F. E. FORD, Middlefield, Ohio.

TO EXCHANGE.—Gold watch, nearly new cost \$40 (G. M. Wheeler) nickel movement, 21 year hunting case. Also ladies gold watch, cost \$22, nearly new. Both watches in fine condition. Also \$5 gold top ring, cigarette pictures and 4x5 instantaneous camera cost \$15, for good bicycle or offers. OTIS CALLAHAN, Cedar Run, Pa.

When answering advertisements always mention the "OÖLOGIST."

FOR SALE.—One set of 1 egg and 3 of 2 eggs each of Bald Eagle, all first class with full data. Also a new copy, late edition of Our Birds in their Haunts, for \$2 prepaid. WM. H. BELL, West Point, Va.

EXCHANGE.—Trostler Egg Tools, Stamps, etc. for Periodicals, Eggs or will sell for cash. Send for stamp approval sheets. KERR & PERHAM, Sandwich, Ill.

FOR SALE or Exchange.—Collection, 120 insects in case, will exchange for books on Nature. Youth Companions to exchange for curiosities. Write what you have with 2 cent stamp. R. J. CLEVELAND, Exeter, Me.

WANTED.—To exchange for Books on History, Biography, Travel's Geology and Natural History, a Columbia Tandem Tricycle, in *First Class* condition. Cost \$250. Address, MAX C. METCALF, North East, Penn.

"I have already received many answers to my Ex. notice in March No. and anticipate making many valuable exchanges during the present season." C. C. Henry, N. Y. City.

I HAVE a few automatic ejector revolvers, double action, nickel plated, rubber stock, center fire, 32 or 38 cal., 3 1/4 inch rifle barrel and long fluted cylinder, weight 16 oz. Sent on receipt of \$1.25. Sold elsewhere for \$12. Have also double action, nickel plated, rubber handle and patent ejector for only \$1.98. Sold elsewhere for \$5. F. E. HOLTER, Box 972, Oberlin, Ohio.

WE WILL give specimens of any kind, advertising space in the Oölogist, and for extra good offers *anything* we offer for sale or possibly CASH for first-class Indian Relics, or for new or 2d hand books on Natural History, in good condition, ornithology, or oölogy preferred—a set of the "Natural History of New York" and copies of "Coores' Key" especially desired. F. H. LATTIN & CO Albion, N. Y.

LAND and Fresh Water shells from this locality, for others, or for 1st class single eggs, (with data) not found in Ontario. WM. H. MYLES, 53 Arkledun Ave., Hamilton, Ont.

\$100 Safety in good condition for shot-gun or rifle (either whole or part payment) Send for particulars. GUY ARMITAGE, 779 Hubbard St., Milwaukee, Wis.

ANYONE sending me 5 U. S. copper cents, prior to 1845 in fine condition. Will receive by return mail a fine large spec. of Petrified Moss. A. B. ROBER'S, Weymouth, Medina Co., Ohio.

LOOK! A thirty-two calibre nobert. rifle, rubber bands and chemical for reproducing pictures (woudertub) for best offer in sets, for particulars write CLINTON M. CARY, 1st W. 135 St., New York.

A NEW method of mining, milling, roasting and smelting different kinds of ores has been successfully demonstrated in Germany, and is now being introduced with unprecedented success. The slow and cumbersome methods heretofore employed will be discarded, and the cost of various ores in treatment or conversion into metal, especially Leads, Zinc and Silver Ores, Nickel, Cobalt and Copper, greatly reduced. All the matter of the latter, which was heretofore sent to Germany, is now being refined in the United States. THE HARTSFELD GERMAN MINING SYNDICATE of NEWPORT, KY. invites correspondence. (See their advertisement.)

AGENTS WANTED. Something new. Full particulars. One man made \$27.40 in one day. One lady made \$22 in one day. Address Lock Box 113 A. B. P. CO., South Bend Indiana. Mention Oölogist.

Southern California Views

5x8 exact facsimile of those exhibited at World's Fair, printed by same photographer showing orange groves, beautiful gardens, avenues, mountain scenes, etc. 25 cts each, 12 assorted \$3. 6 assorted \$1.60. Send for list of 61 different views.

WM. J. ROLFE,
San Bernardino, Calif.

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Best and Largest Practical Art Magazine.
(The Only Art Periodical awarded a Medal at the World's Fair.)

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A specimen copy, with superb color plates (suitable for framing or copying) and supplements of full-size working designs sent on 10c mentioning THE Oölogist and enclosing (regular price 35c. \$4.00 a year). For 25c an instructive manual, "Painting for Beginners," sent in addition to the above. Our 1894 illustrated catalogue of about 200 color studies and pictures sent for 2-cent stamp.

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THE HARTSFELD FURNACE & REFINING CO., NEWPORT, KY., (Established 1855) Consolidated Representatives of Smelting and Refining Works in most principal cities in the United States, under one management.

Manufacturers of Nickel and Aluminum Alloys, Smelting and Refining Furnaces, Metal Fume Condenser, Silver, Lead and Copper Plants, Bauxite Aluminum Reduction Works, Blast-furnace Plants for pig-iron and steel converters.

We will take entire charge of the work from foundation up including constructions of buildings, erection of machinery, turning the entire plant over to you under steam and in running order. We have special experts in our employ for that purpose. Why experiment when you can have a certainty?

Cash advanced on silver lead concentrates and lead slag shipments. Correspondence solicited. The Hartsfeld Furnace and Refining Co., (Consolidated) Newport, Ky.

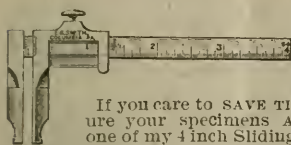
DISCOVERIES of Silver, Gold and Copper Ores, Nickel, Cobalt, Lead, Zinc, Antimonial Silver, Bauxite, &c. Abandoned mines will receive far better financial assistance by visiting or corresponding with THE HARTSFELD FURNACE & REFINING CO., Newport, Ky., who are practical German Mining Engineers and Contractors. All questions on Metals, Ores and their best practical methods of treatment readily and conclusively solved. Why experiment when you can have a certainty?

MINERAL ORE DEPOSITS now idle for want of funds to develop, can find practical and financial assistance by corresponding with HARTSFELD GERMAN MINING SYNDICATE, NEWPORT, KY.

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Sliding Calipers! All Sizes & Graduations.

Vernier and Metric or French System.



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If you care to SAVE TIME and measure your specimens ACCURATE, get one of my 4 inch Sliding Calipers, with hardened jaws. 1 1/4 in. long, graduated in 1-100 of an inch. Sent registered to any part of the U. S. for \$2.50. 6 inch scales graduated in 1 100ths and mm.—75 cts.

Send for one to

E. G. SMITH, Columbia, Pa.

The above tools are first-class in every respect and WARRANTED ACCURATE. (Liberal inducements to agents.)

YOU

Can coin big money. Bran new plan. Great craze. Just out. "Good side line." Biggest chance ever offered agents salary or commission. Be quick. Goods on credit. Samples etc. Free. MULTIPLEX CO., No. 171 8th and Locust, Phila., Pa.

Wonderful

To take Orders. No delivering or collecting. H. Harte, Jeweler, Rochester, N. Y., will bring.

MEN WANTED

To take Orders. No delivering or collecting. Experience not necessary. Steady employment. Best terms. Write at once and secure choice of territory.

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Selected Photographs, printed and mounted by a Professional Photographer, from 4x5 Negatives, on Bevel Edge Gold Line Mounts 5x6 inches.

Address P. F. MARCH, Fern Bank, Hamilton County, O.

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Of all kinds for Naturalists a speciality. Note and letter heads, envelopes, circulars, illustrated catalogues for natural history dealers. Have hundreds of engravings of natural history specimens. Write for estimates. 100 envelopes printed. 45c. noteheads same price, postpaid. C. F. CARR, Job Printer, New London, Wis. tf

THE NAUTILUS.

A monthly devoted to the interests of Conchologists. Edited and published by H. A. Pillsbury, Academy of Natural Sciences and C. W. Johnson, Wagner Free Institute, Philadelphia, Pa. Send for sample copy.

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Send for illustrated catalogue, containing 26 handsome designs, FREE. Address SHOPPELL'S MODERN HOUSES, 63 Broadway, N. Y. J6t

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From the *Orient* and *Assam* (Malakka) India. Australia, Africa, etc., correctly named at moderate prices, also European and exotic Birds skins. HERMANN ROLLE, Emdener St., 4, Berlin, N. W., Germany

H. H. & C. S. BRIMLEY, COLLECTORS, RALEIGH, N. C.

First-class Bird and Mammal Skins and Eggs, Reptiles and Batrachians both alive and in alcohol. Full data. Send stamp for price lists.

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Publishers, Patentees, Manufacturers, etc., are daily requesting us to supply the addresses of reliable circular distributors, bill posters, etc. Brunn's success is marvelous, and will open up in 200,000 AGENTS HERALDS next issue, to be mailed to business men, new, profitable and permanent employment to one man, woman or youth in every town and hamlet in the U. S. and Canada. "The early bird catches the worm." We want a few such ads. as Brunn's (sample below) to start with in this month's MAMMOTH edition of AGENTS HERALD.

BRUNN Nails up signs, distributes circulars, papers, samples, etc., throughout Blackhawk and surrounding counties only \$3.00 per 1000. Address, W. H. BRUNN Waterloo, Ia.

Brunn paid \$2.40 to insert above 4 lines, June '90. He began during the summer. That ad. paid then; *is paying yet*. He has been kept constantly busy, employs three men to assist him, clearing on *their labor* from \$10 to \$15 a day distributing circulars at \$3.00 per 1000 for many firms who saw his ad. in THE HERALD. It costs every firm at least \$10 in postage alone to mail 1000 circulars. A saving to each firm who employ you of \$7 per 1000. Ten firms may each send you 1000 at the same time, making 1000 packages of 10 each, for distributing which you would promptly receive \$30. 15 in advance and \$15 when work is done. Parents make your boy a present. Start them in this growing business. Begin this neat business before some one in your county gets the start of you. "Come in on the ground floor." Instructions How to Conduct the Business, Free to each distributor ONLY, who sends us \$2.40 cash or postage stamps for a 4 line "ad."

AGENT'S HERALD,

No. 171 South 8th Street, Philada., Pa.



STEAM COOKER FREE!

The Triumph Cooker with lock cover, will cook Meats, Fish, Vegetables, Beans, Brown Bread, Fruit, Custards, &c, without odor. Fits any size stove, coal, wood, oil or gas. Having iron base, it is better and cheaper than a tin cooker. We send one Cooker free with Agent's first order. Enclose two cent stamp to The Hartford Hollow Ware Co., B. 673, Hartford, Conn.

BARGAINS.—Large Peacock, tail spread, good fire screen, 10 feet across, \$35. Another specimen mounted on pedestal, natural position, cheap at \$25. Mounted "Great Blue Heron" \$5. Stuffed Porcupine Fish, a great curio, 14 inches in diameter, \$8. Hawk-bill Turtle backs polished, rare, and very pretty, \$7. Japanese Pheasant, mounted as panel picture, cheap at \$15. Fox head, mounted on large shield, with tail on either side and riding whip, \$15. The above are all fine pieces of work and will give eminent satisfaction. F. H. LATTIN & CO., 3571 Cottage Grove Ave., Chicago, Ill.

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Silk Worm Eggs for Silk Culture.

We make a specialty of rearing Silk Worm Eggs for Silk Culturists. INDIAN, JAPAN-
ESE, CHINESE, EUROPEAN & AMERICAN
species. Full instructions given, how to raise
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faction guaranteed. We sell many thousands
every season, especially in the Southern and
Western States. Send 5 cents in stamps for
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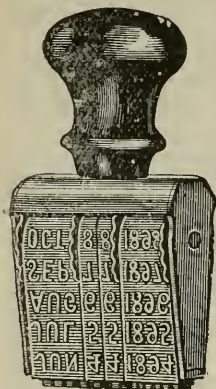
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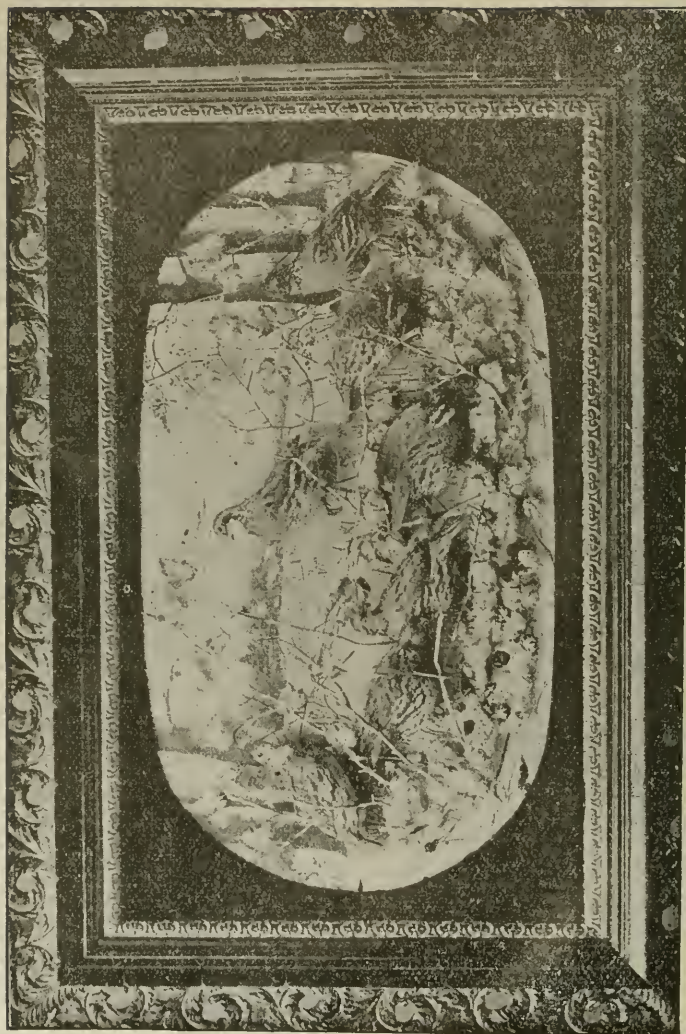
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A Group of Bob-whites, (*Colinus virginianus*, Linn) under Oval Convex Glass.
As exhibited by F. H. Lattin & Co. at the World's Columbian Exposition

THE OÖLOGIST.

VOL. XI. NO. 4.

ALBION, N. Y., APRIL, 1894.

WHOLE NO. 102

Maryland Birds that Interest the Sportsman.

Colinus virginianus, Bob-white, Partridge, Quail. The Partridge is the most well known game bird in the United States. It is resident with us, but if food or shelter is wanting during the winter, it will travel some distance from its summer haunts.

They always roost upon the ground, often in the middle of a field, at other times within the shelter of a thicket or in the woods they arrange themselves in a circle, and if disturbed scatter in all directions.

Their principal food consists of seeds, berries and various kinds of grain. In the winter when these are covered by the snow they frequently go into barn yards and eat with the domestic fowls. During the severe weather in January, 1893, large numbers of Partridges perished. Their food was covered by the deep snow and they became so emaciated and weak that they were unable to stand the cold, which under ordinary circumstances when able to obtain a sufficient supply of food, they could easily have done. In Somerset County I heard of three covies found dead in one field, huddled together and frozen.

In the migrations of the Bob-white they often come to a river and fly across, but like the Turkey they are sometimes unable to reach the opposite shore. A case like this occurred near our city some time ago. Two gentlemen were fishing in the river when a covey attempted to fly across, but their strength gave out and they dropped into the water near their boat. The birds were unable to rise, and the whole lot, fourteen in all, were captured.

In September, 1892, early in the morning, a covey of nineteen Bob-

whites and one Ruffed Grouse was seen on the lawn of a house situated next to mine. This was in the city, but the house was in a yard of about two acres, and had quite a large grass-plot with trees and bushes.

Artramia longicauda, Bartramian Sandpiper, Field Plover, Upland Plover, Grass Plover, etc. This is a bird of the pasture fields and is seldom found where the grass is so tall that it cannot see for some distance around. They are generally very wild, and the plan of hunting them from a wagon is sometimes successfully tried, as they allow a horse and wagon to come much closer than a walking man.

In our lower counties in July and August they congregate in the large fields in immense numbers, often to the extent of several hundred. At this time they feed on grasshoppers and get very fat. I have frequently shot them and on picking them up found the breast burst open from striking the ground.

Numenius longirostris, Long-billed Curlew; Sickle-billed Curlew. Migratory; rare. A few seen in the winter.

Numenius hudsonius, Hudsonian Curlew, Short-billed Curlew, Jack Curlew. The most abundant of our Curlews. They are usually very wild and it is difficult to secure them, although they often come to the decoys.

Numenius borealis, Eskimo Curlew. Capt. C. H. Crumb writes me that it is a rare fall visitant at Cobb's Island. It should be found on our coast at the same time, but I have no record of it.

Charadrius squatarola, Black-bellied Plover, Black-breast Plover, Beetle-head Plover, Bull-head Plover, Ox-eye, etc. This bird, which is subject to a variety of plumage from young to adult, as well as a variety of names, is an

abundant migrant in the spring and fall. It decoys well, and when flying with other birds it generally leads the flocks, for which reason it is often called Pilot.

Charadrius dominicus, American Golden Plover. This Plover is certainly found in our salt marshes, during its migration, still I have no record of its occurrence.

Actitis vocifera, Killdeer. Resident except during very severe weather. Found at times in the marshes, but generally in wet pasture fields and meadows.

Ardea interpres, Turnstone. Migratory; common in the marshes and along the sea shore, where large numbers are killed over the decoys while after better game. Commonly called "Calico-backs."

Bonasa umbellus, Ruffed Grouse, Pheasant. This, the Partridge of the northern and eastern states, and commonly called Pheasant with us, is a resident in the state. It is generally found in rough hilly country, among pines and laurel (*Kalmia latifolia*). At times, but not often, they have been found a long distance from their usual haunts. In "American Partridge and Pheasant Shooting," Frank Schley says: "I have come across single Pheasants in the open fields, among coves of Partridges, at least four miles distant from any woods or thickets."

They are very swift of flight, and when flushed fly off in a straight line, generally for about one hundred yards, then taking a short turn to either the right or the left they alight.

A peculiar habit of the Ruffed Grouse is its drumming. This is mostly done about the mating season, although I have heard it in November. In trying to locate the bird by this sound, it is found to be very difficult to do so.

Often in winter when the berries which form their principal food have disappeared, they eat the buds and

leaves of the laurel, which is said to poison their flesh and render it unfit for the table, indeed it is said that death has resulted from eating them under these conditions.

Tympanuchus americanus, Prairie Hen, Pinnated Grouse. The Prairie Hen once ranged all through the eastern part of the United States, but was extirpated many years ago.

Some years since about a dozen birds were brought from the west to this state, and liberated in Kent county. One or two were seen shortly after, but what finally became of them I do not know.

Meleagris gallopavo, Wild Turkey. This the largest and most noble of our game birds, is still found in abundance in some parts of the state; being migratory in a degree according to the supply of food. When on these journeys if they come to a river, they will either mount to the tops of the trees, or a bank, before taking their flight across.

I am told they have frequently been seen flying across the Potomac River near Weverton, and on several occasions have been seen to drop into the swift water, being unable to reach the Virginia shore. During the fall of 1893, a flock of ten or twelve Turkeys ranged the side of the mountain between Weverton and Knoxville, Frederick county.

The Turkey has many enemies, one of the worst being the Great Horned Owl (*Bubo virginianus*).

Mr. D.C. Elliott gives the following as the manner in which this Owl is evaded. He says: "As soon as the warning cluck of some watchful Turkey has placed the whole number on their guard, they immediately stand upright upon the limb and observe every movement of their foe, who soon selecting one of them for his prey, swoops upon it with the velocity of an arrow, and it would seem that the fate of that one was inevitable; but as rapid as was the Owl's movement, still quicker is that of

his intended victim; for, lowering his head and inverting his outspread tail upon his back, he meets his enemy with this inclined plane, over which he glides harmlessly, and the Turkey drops to the ground and insures his safety by running away."

As a rule the male Turkey weighs about eighteen pounds, but often this weight is greatly exceeded. In December, 1892, one weighing thirty-two pounds, killed in Garrett county, was exhibited in this city.

Ectonistes migratorius, Passenger Pigeon. The Wild Pigeon was a common migrant with us until about fifteen or twenty years ago; being generally seen in large flocks during September and October.

A favorite place to stand and shoot them was on Bare Hills, as in their flight they would pass over there nearly every morning between six and eight o'clock. This last fall (1893) they have been more abundant than for many years. I having received notice of three large flocks being seen; the largest containing about sixty birds, the smallest about twenty. Single birds frequently fly with flocks of Doves.

They are very fond of pin oak acorns and in feeding on the ground they keep up a continual forward movement, the rear birds flying ahead of the others. Years ago in Howard county large numbers were killed at night while roosting and their bodies fed to the hogs. Thus disappeared one of the noblest birds of North America.

Zenaidura macroura, Mourning Dove. Common; resident in some parts of the state. In the fall of the year when they flock in the stubble and thistle fields, they afford a great deal of sport to the gunner. They fly very swiftly, but as their flight is regular they make an easy target.

I have frequently had my dog to "point" them the same as a Partridge.

Dolichonyx oryzivorus, Bobolink. The

Reedbird as it is called with us, is an abundant spring and fall migrant.

When they make their appearance in the fall, generally about the middle of August, they are found in the pasture fields feeding on the seed of the foxtail, and other grasses. About the second week of September they are abundant in the fresh water marshes of our rivers and are then very fat. Large numbers are killed as they fly across the "guts" from one marsh to another.

Our best marshes in which to hunt them are in the neighborhood of Marlboro and Nottingham, where many are killed, as well as Sora. When in good condition they sell readily for from seventy-five cents to one dollar per dozen.

Coturnix vulgaris, Messina Quail. In the fall of 1880, several hundred of these exotics were imported from Italy, and liberated in various parts of Baltimore county. Two hundred were turned loose eight miles from this city, and soon after hunted with dogs, and although the dogs showed signs of being on game, the birds could not be flushed.

In 1881 a nest was found containing about a dozen eggs, all of which hatched but four.

WM. H. FISHER,
Baltimore, Md.

Hints About Data and Field Books.

Had I a thousand tongues, I would use them all, until tired, in clamoring for *uniformity of data*.

If one keeps his data as some do their eggs—a few in a bureau drawer, half a dozen tilted into the egg-trays, and a few odd lots pigeon-holed in all sorts of out-of-the-way places, it will matter little to him what may be the size, texture, make-up and neatness of the data that accompany the sets in his collection. But if like myself he desires to keep several hundred data neatly filed, in a single letter case and so alphabeti-

cally arranged as that he can refer instantly to any data in the lot, it will matter much to him that he have them as nearly uniform in size as may be.

Now, in my fat file of datas are long narrow ones; tall narrow ones; big square ones; and little oblong ones, and all sizes from the 6x8 inch wholly hand written, delightfully neat, and scientifically minute and circumstantial datas of the late lamented Harry K. Janison—to the 3x1½ inch scraps affected by collectors of the “Hole-in-a-tree, high up” sort. (These petty squibs have the nest data,—what there is of it,—on the *back*, which impertinence, of all the impertinences that make one growl, are most provocative of growling.)

Some datas are of the flimsiest paper and some on *linen* paper, neat and durable. On some the printer's ink seems to have become frightened at the paper and ran about everywhere save where it *ought*, while others clear of type and clean of ink bear no such impression of cheap stock, slop work and of the atmosphere and personality of the (printer's) devil.

Could I have *my* choice I would have in uniform use, a clear white “flat” linen or strong cotton data, printed with clearest type on paper of medium thickness, of an average size of about, or *exactly* 5½x3½ inches. The inscription, “*Private (or Oölogical) Collection of thus and so*” should, if it occurs, be set modestly in small type, leaving the bulk of the space on the data at the *bottom* for the description, which is often, alas! far too meager to satisfy either curiosity or scientific desire. Such space can hardly be too large, consistently with the size of the data, for, as many can bear witness, the data prepared by oölogists with whom it is a delight to deal, begin at the top space reserved for the description—run, finely written, down to the bottom and still farther down along the lower data margin and then, likely as not, run over to

the back side ending in a sketch of the nest *situs* and the locality. Such were the datas made out by the genial Dr. Cooke of —Oregon (when will he ever leave home setting for a bit to collect eggs again?) data, accompanied, of course, by eggs daintily prepared. This sort of back-door illustration, and this minuteness of description carry with them the charm of the enthusiast, the truly scientific collector, who always gives us more than we had bargained for, besides inoculating us, infecting us with his glorious spirit. So then, we all beg of you, don't buy or use anything but the largest medium sized oblong datas, neatly printed on good strong paper.

“Where may such be had?” Ask Lattin, or any other “standard” dealer. Tell him what you want, and you'll get it. There never yet was a wide-awake dealer so foolish as to keep in stock that for which he had no call, nor so disobliging as not to provide whatever his patrons might demand. *Let us have a standard data blank.*

A timid don't if you please: Don't *fold* data in mailing, but if, like myself, you have been so foolish as to buy a quantity of square datas which *must* be folded use them up or burn them quickly and then demand the standard, and take no other.

Of course, being a live collector you carefully record the particulars of every set of eggs you take. Do you then desire for that purpose, a set of books that are just what one wants for such a use and that can be as readily and as snugly filed away year by year as the datas about which we have been reading? I have used such a book for three years. It is a peculiarly tall, narrow bank-book, interleaved with blotting paper, which presents the high advantage of enabling one to make entries in ink without necessity for the tiresome and time taking use of a blotter. (Of course, while in the *field* you

carry a rough "pass-book," or some such article, in which are *pencilled* your short-hand or hieroglyphic notes, but *this* book is for the full, careful and permanent record.)

I have written the makers of this bank book, asking them to give Lattin & Co. prices in quantities for the book, furnished without the bank printing, or with any such indicative or time-saving marks or abbreviations as somebody's wisdom or ingenuity may suggest. And I am very sure that the publishers of this paper will furnish these books to their patrons at such prices as will make it a disgrace to every collector, that is an oölogist, *for life*, if he fail to use them.

P. B. PEABODY,
Owatonna, Minn.

A Collecting Trip in Northern Iowa.

Saturday, May 13, 1893, was to me the date of a "Red Letter Collecting Trip" if I may borrow the expression. About 6 a. m. I started with a friend for Lake Edwards, which is a small lake about six miles southwest of Forest City in Hancock county. As we were crossing the prairie about 7 o'clock we heard the rumbling "boom, boom" of some prairie chickens coming from over a hill, and on ascending it, saw quite a flock of them on a level place on the short prairie grass, with one in the middle strutting about with head raised, tail spread and wings drooping.

There may have been more than one of them drumming, but they took alarm and flew away so quickly that I had very little time to notice.

Saw a few Ducks in the sloughs, numbers of Bartremanian Sandpipers on the prairies and fields and many Sora Rails. The Soras seemed so very tame that they could hardly be made to fly by wading after them as they ran along trying to hide in the thin grass; with their short, stubby tails bobbing when they walked, and standing straight up when they were standing still.

Shot a female Wilson's Phalarope, from a bunch of four or five in the water in a small slough. When I came to dissect it I found it contained an egg about the same color as a Blue Jay's egg, but paler, larger and more pointed. It would probably have been laid that day had I not shot the bird in the morning.

We stopped for a while at a small pond east of Lake Edwards, and hunted around for Ducks' nests, but found none.

My friend, who had lived in this vicinity and hunted considerably, though not a "collector" said that ten years ago he sometimes had gone out with a pail and gathered in Ducks' eggs to eat, around this pond, but of late years they were scarce.

We soon came around to a slough running out north from Lake Edwards, bordered by a grove of small trees, mostly oaks. Examined three nests that looked like Crows', all in oaks and not over twenty-five feet from the ground. One contained six of young Crows and another fragments of eggshells. They were much more substantially built than any Hawk's nest I have seen, being smaller, deeper and closely built of sticks, and lined with soft strips of bark, binding twine, hair, etc.

While standing on the bank of the lake three large white gulls came flying over, of which we managed to drop one which proved to be a fine female Ring-billed Gull.

Finding a boat we rowed out in the lake, where we saw numerous muskrats, coots and hundreds of Black Terns (commonly called "Slough Gull") hovering around screaming and dipping their heads into the water occasionally. On shooting one a large number hovered over where it lay in the water, affording an excellent opportunity for wing shots.

Soon after this we left the boat and concluded to have a swim, as the day

was so warm and the water did not feel so *very* cold to the hand. One plunge was enough to convince me that it was rather too early in the season for comfort and I lost no time in getting out and dressed again.

After this we started to walk over the hills to another small lake, not, however, before my companion had killed three Blue-winged Teal at one shot, in a small inlet. On the hills west of the lake I took a set of three beautiful spotted eggs of the Marsh Hawk from a nest on the ground, securing the female bird. On arriving at the lake I sat down to write down some notes and watch some small birds, while my companion scoured around the lake, securing another Teal. The Redpoll Warblers (*De. droica palmurum*) were quite abundant among the low bushes and on the ground.

On our return trip I shot a Redpoll Warbler and a female Virginia Rail. It was dark when we reached home and though I had "that tired feeling" before I got all my birds skinned that night, I felt myself amply repaid for my trip, being successful in securing both specimens and notes, having observed the following species:

Ring-billed Gulls, Black Terns, Cranes, Virginia and Sora Rails, American Bitterns, Wilson's Phalaropes, Yellow-legs, Pectoral Sandpiper, Least Sandpiper, Bartramian Sandpiper, American Coots, Blue-winged Teal, Spoonbills, Pintails, Mallards, Mourning Doves, Canada Geese, Prairie Chickens, Marsh Hawks, Crows, Blue Jays, Red-winged Blackbirds, Meadow Larks, Swallows, Sparrows, Martins, Bronzed Grackles, Yellow, Myrtle and Redpoll Warblers, Brown Thrushes, Marsh Wrens, Kinglets and Robins; and the first Bobolinks, Yellow-headed Blackbirds, Black-throated Bunting, Kingbirds, Maryland Yellow-throat, Yellow Warblers and Catbirds that I have noticed this season besides several species that I could not positively identify.

RUDOLPH M. ANDERSON,
Forest City, Iowa.

SCENES FROM THE LIFE OF ALEXANDER WILSON.

His Second Southern Tour—Continued.

G. VROOMAN SMITH.

X

In our last article we were following our ornithological friend through the wilds of Kentucky and Tennessee and more particularly through the one hundred and eighty miles of Forest desert intervening between Danville and Nashville.

How vastly has that beautiful territory changed since our traveller pushed his way through its wilds! At the time of which we write there was not a single town or village along the whole almost unbroken waste. Yet it was so common for Wilson to travel unaccompanied through uncultivated wildernesses that his out door nature had in fact become a part of the primeval solitudes he was accustomed to explore in quest of those feathered creatures he had adopted as his companions, friends, aye we may almost say as relatives, for in them he saw objects worthy of his most humane consideration. Separated from his native land and near kin by three thousand miles of watery waste, and he himself alone in the world, do we wonder that he bestowed so much attention upon those winged denizens of the forest whom he chose as his only companions for long days and nights of fatiguing travel through the then unbroken American wilds? It is worthy of note that our great pioneers in ornithology have all chosen similar modes of life. And yet how imperfect would be our knowledge of those birds frequenting wild and dangerous places, if a Wilson or an Audubon had not launched their canoes on unbroken waters, pitched their tents in lonely forests, kindled their camp fires far from the habitations of man, with the roaring of

the cataract or the distant evening songs of the warbler and sparrow as their only society for weeks at a time.

But kind reader I must refrain from further digression, and return to our friend as we left him at Danville, Kentucky making preparations for his immediate departure for the far south. Not to go into details as regards his equipment, suffice it to say that at this day we would regard his baggage very insufficient for an overland journey of one hundred and eighty miles. The spring was particularly backward and it was only when he was far on his way toward Nashville that the latent life of vegetation began to unfold, and, with the return of the warm south wind most delightful wonders were produced in the woods and fields. The budding sassafras, the large white petals of the dog-wood contrasted with the deep green of the poplar and buckeye, gave to the landscape on every side a richness of the most pleasing relief to the eye of Wilson. But that which engaged our traveller's attention the most was the multitude of new and strange birds that were flitting and warbling among the branches of the verdant freshness overhead. Here and there at extended intervals a pioneer had broken the wilderness, and when Wilson emerged from the deep recesses of the solitary forest, the rich green of the fields, the the farmhouse and cabins, embosomed amidst orchards of glowing purple and white, all lent to the scenery a strange charm of the sweetest relief to the senses of our traveller. Near the foot of a high mountain, called Mulder's hill he overtook one of those family caravans so common in that country, moving westward to some agreeable spot where they would halt and hew a home out of the stubborn wilderness. He was informed that the caravan was from Washington County, Kentucky, and was going as far as the Cumberland river in Tennessee. "The singular ap-

pearance of this moving group, the mingled music of the bells, and the shouting of the drivers, mixed with the echoes of the mountains, joined to the picturesque solitude of the place, and that the various reflections that hurried through my mind, interested me greatly, and I kept company with them for some time." The 25th of April he spent the night at the house of Isaac Walton, thirteen miles from Nashville. After breakfasting at an early hour, Wilson was preparing to start when the hospitable landlord refused to take any pay, and replied, "you seem to be travelling for the good of the world, and I cannot—I will not charge you any thing. Whenever you come this way, call and stay with me, you shall be welcome." Wilson remarks that this was the first instance of such hospitality he ever met with in his travels in the United States.

The spring was now well advanced in that climate and the multitude of unknown birds everywhere passing northward, was a constant source of interest and delight to our traveller. His gun and pencil were actively engaged and many drawings were forwarded to Mr. Lawson, his engraver, but which unfortunately never reached him. Wilson had the good fortune to pass through an extensive pigeon roost, or breeding place, about fifty miles from Danville. He estimates it to have extended three miles in width, and more than forty in length. The trees were principally beech, and loaded with nests, and he says, that in different places he counted more than ninety nests on a single tree.

From Nashville his next point was Natchez, Miss., a distance of four hundred and eighty miles the whole waste being through the vast wilderness inhabited only by Chicksaw and Chock-taw Indians. This long journey through a savage country was the most fatiguing ever undertaken by our ornithologist, and added to the usual hardships of out door life he was frequently at-

tacked with dysentery and fever, and at times became so ill that it was difficult for him to proceed. The remedy he used was simple, being a close diet for a week on raw eggs and strawberries which were then in perfection. He also experienced the very uncomfortable sensation of being in a tornado when the limbs of trees were whirling past him in very volleys. He himself adds that he would prefer to stand in the hottest field of battle than encounter another such tornado. All these dangerous experiences go to show how dearly the nine volumes of Wilson's American Ornithology were purchased.

May 4th he set out on horseback from Nashville with a pistol in each pocket and a fowling piece belted across his shoulder, and at once plunged into the uncultivated wilds of Tennessee and Mississippi. From his carefully prepared journal we learn that the first night he slept in a Chicksaw Indian hut, the Indians spread a deer skin on the floor for him, and with his portmanteau as a pillow he declares that he slept tolerably well. The following morning he was early in the saddle and rode fifteen miles, stopping at an Indian hut to feed his horse. Wilson carried with him a paroquet, and this little feathered being proved to be a continual fund of amusement to all ages of these Indians. While his horse was feeding he exhibited his feathered companion to the whole family as they crowded around him, and as they did so it gave him an opportunity of "studying their physiognomies without breach of good manners." He describes the natives as being scantily clothed, and with just enough of civilization to make them lazy and anxious for whisky.

The country was covered in many places with swamps, and through these Wilson pursued his way with difficulty. These swamps were covered with a prodigious growth of canes and high woods, which together shut out almost

the whole light of day for miles at a time. He finally reached the Tennessee river which was swollen by the spring rains, thus making it about a mile across at that point. The low bottoms bordering the banks were covered with huge canes, twenty or thirty feet high, and he declares that these cane swamps are the gloomiest and most desolate looking places imaginable. Not being able to cross the swollen river he encamped for the night, "kindled a large fire, munched a bit of supper, and laid down to sleep: listening to the owls and chuck-wills-widow, a kind of whip-poor-will that is numerous here. I got up several times during the night to recruit my fire, and see how my horse did; and but for the gnats, would have slept tolerably well." Arising early in the morning he shouldered his fowling piece and scoured the woods for game till six o'clock. At eleven o'clock he was able to hail a boat and cross the river, much vexed at the long delay.

The country now assumed a new appearance; the woods were entirely free from fallen timber and underbrush. He says he could see a mile through the woods, which were covered with high grass fit for mowing. Every spring fire ranges through these woods and they are thus kept so remarkably clean that they look most like elegant noblemen's parks. Wilson was struck with the number of strange and beautiful flowers that presented themselves as he rode along, and remarks that this must be a heavenly place for the botanist.

The Indian boys with their blow-guns interested him greatly. These blow-guns are made of cane tubes, seven or eight feet long, and when well made are perfectly straight. The arrows are slender strips of the same material, covered for several inches at one end, with the down of thistles, in a spiral form, so as just to enter the tube. By a quick puff they could shoot their arrows with

such violence, as to enter the body of a partridge twenty yards off. He enlisted several of these boys in his service but all returned from the hunt without success.

I ask the indulgence of the kind reader to quote from Wilson's journal in order to give in his own words the experience he had with an Indian and a mocking-bird. "About half an hour before sun-set, being within sight of the Indians where I intended to lodge, the evening being perfectly clear and calm, I laid the reins on my horse's neck, to listen to a mocking bird, the first I had heard in the western country, which perched on the top of a dead tree before the door, was pouring out a torrent of melody. I think I never heard so excellent a performer. I had alighted, and was fastening my horse, when hearing the report of a rifle immediately beside me, I looked up and saw the poor mocking-bird fluttering to the ground. One of the savages had marked his elevation, and barbarously shot him. I hastened over into the yard, and walking up to him, told him that was bad, very bad! That this poor bird had come from a far-distant country to sing to him, and that in return he had cruelly killed it. I told him, the Great Spirit was offended with such cruelty, and that he would lose many a deer for doing so. The old Indian, father-in-law to the bird-killer, understanding by the negro interpreter what I said, repeated, that when these birds came singing and making a noise all day near the house, somebody will surely die,—which is exactly what an old superstitious German near Hampton, Virginia, once told me. The bird-killer had married the two oldest daughters of the old Indian, and presented one of them the bird he had killed."

He found the Chickasaws to be a friendly inoffensive people; and the Choctaws, though more reserved, were equally harmless. Wherever he hap-

pened to stop while in their territory he was treated with civility.

He arrived at Natchez, May 7th, having performed this extraordinary journey in thirteen days. He seems to have enjoyed this journey, although it was attended with considerable expense and fatigue, and ever after he referred to it with satisfaction. While at Natchez he accepted the hospitality of Mr. William Dunbar, a friend of science, and in his company Wilson spent some of the most profitable and enjoyable moments of his life.

On the 6th of June he reached New Orleans, and on the 24th set sail for New York, where he arrived on the 30th of July. He stopped a few days on the islands off Florida, and while there gathered much information of the far south birds.

From New York he at once returned to Philadelphia, arriving there on the 2d of August.

He had accumulated on this journey a stock of new material for his work, including several undescribed birds.

He had been away from home a little over six months, and in all that time his expenses amounted to only four hundred and fifty-five dollars.

The Woodpeckers of Minnesota.

Hairy Woodpecker, *Dryobates villosus*
Permanent resident. Through the winter this species retires to the pine and tamarack forests and is seldom seen. About the latter part of February they make their appearance about the cities, often in company with the Downy Woodpecker.

Towards the latter part of May they retire to the woods to breed and are not often seen about houses. They prefer rather thick and low woods near water usually, for nesting. The hole is excavated in a dead willow, oak or maple tree, usually from four to thirty feet up, and about sixteen inches in

depth. The longest time taken by a pair in excavating their hole that has come under my notice, was 12 days. This was a nest 23 inches deep excavated in an oak tree. The shortest was four days, this in a willow stubb.

The eggs are usually four in number, sometimes five, and are laid on chips at the bottom of the cavity.

They measure from .90 to 1.05 in length and from .60 to .75 in breadth, and are pure ivory white in color with a roseate tinge when unblown.

Downy Woodpecker, *Dryobates pubescens*.

Resident and tolerably common. This is a more social species than the last and is seen commonly about houses toward the latter part of March.

The nests of this species are begun about May 15th and fresh sets may be secured from then to June 10th.

The holes take from two to ten days in excavating and are from eight to fifteen inches deep and about two inches in diameter at the opening.

The holes are usually made in oak or willow stubs. They breed abundantly up the Minnesota River in the dead willows along the banks. Eggs usually five sometimes four and rarely six or seven. Pinkish white when unblown, but fade to a dull white when blown.

They measure from .70 to .85 in length and .60 to .65 in breadth.

Yellow-bellied Sapsucker, *Sphyrapicus varius*.

Fairly common summer resident, arriving the first week in April, and from then until the first or second week in May they may be commonly seen about the maple trees in the cities, which are punctured by them for the sap and more commonly for the larvæ and insects which lie under the bark.

Towards the second week in May they retire to the thick woods to breed, where they excavate their holes in dead trees, usually about twenty feet from the ground but occasionally much higher.

The eggs are laid by the first week in June, and are usually four in number, very rarely five. White like all other Woodpecker's eggs, with roseate tinge when unblown. Two sets measure as follows: .80x.60, .82x.59, .82x.62, .79x.60 and .90x.67, .88x.65, .88x.65, .87x.60.

Pileated Woodpecker, *Ceophloeus pileatus*.

Rare. This bird is rarely seen in this locality (St. Paul), but is common farther north.

One nest was found last June in Dakota county, which contained three eggs, well incubated. Average measurement 1.30x.98.

Red-headed Woodpecker, *Melanerpes erythrocephalus*.

Common summer resident. Arrives about the first of April. The birds prefer to nest in the vicinity of houses and do not resort to the woods unless molested. These birds nest almost anywhere making their holes in fence posts, deserted houses and even chimneys.

The eggs are four to six in number and measure on an average 1.00x.80. This species will continue to lay like the Flicker, provided a nest egg is left. They leave early in October.

Flicker, Yellow Hammer, etc., *Colaptes auratus*.

Abundant summer resident, arriving early in April and leaving late in October.

These birds are very sociable but also suspicious, and prefer to nest near houses, but are not always permitted to do so as they are often killed because they bore into houses, commonly to get out of reach of small boys.

They are well known to lay a large number of eggs when repeatedly robbed. When not disturbed the average set consists of seven eggs, often six and sometimes eight or nine. Average measurements 1.10x.90s.

WALTON MITCHELL,

St. Paul, Minn.

The American Crow.

For some two years now, the Ornithologist's Association has been making a special study of the Crow. Of course, the great question is as to its utility, or its destructiveness. That it does much mischief no one doubts, but on the other hand, is there a possible balance in its favor. In order to determine this question, the Crows must be closely watched throughout the year, many must be killed and the contents of their stomachs examined. Before we decide on the protection or destruction of any class of birds, there should be a wide range of inductive study, and a very cautious deduction. Some of our members, particularly Mr. Harry K. Manakee, to whose careful observation over many years the substance of this article must be attributed, have given much attention to the study of the Crow.

In respect to the destructive propensities of the species the most noted item is in the corn field. When the corn first comes up in the Spring, the Crow will start his line of march on a row and take out each hill as he goes along, probing his bill straight down by the tender blade and digging up the soft kernel at the root, thus leaving the blade to wither on the surface. As this mischief occurs during the feathering of the young, they are fed on the softened grain. Keeping up a great racket as the parent bird brings the food. As the species is not gregarious at this time of year, but is widely distributed over the vast corn fields in the vicinity of forests, the depredation is widely extended and not striking enough to be closely observed.

The next period of mischief is when the corn is yet tender in the ear. Then the birds light on the ear, pull open the outer end and the upper side and take off a large portion of grain, leaving the remainder exposed to the weather, and thus ruining the whole ear. Mr. Man-

nakee is sure that he has seen not less than a thousand at once engaged in thus damaging the corn fields of Maryland. After the corn is cut the Crows continue in the fields, lighting on the shocks and opening the ears as before. Less damage is done at this time, however, as the corn is less exposed.

When the wheat is shocked the Crow shares the harvest, sometimes alighting on shocks in such numbers as to utterly blacken them. At such times Mr. M. has taken as many as seven at one shot.

Next in importance is the destruction of the young and the eggs of the smaller birds. It is safe to say that this is a favorite item in the Crow's bill of fare. It has a sharp eye, is ever on the alert, and none of the small birds nests, whether in trees or on the ground, are exempt, unless it be the Woodpeckers and such other birds as nest in close cavities. As the small birds are especially insectivorous, the damage is great. Just here it may be proper to say that only those who make a study of bird's nests, can form any conception of the number of them which are destroyed in various ways, probably not less than one-half.

Few people in the North, where the farms are comparatively small and for the most part cleared and under cultivation, can form any conception of the mischief done by the Crows to hen's nests in the South, where the immense tracts of pine woods become alike a rendezvous and a breeding place. A great deal of poultry also is kept in these parts, and the flocks wander more extensively than they would be allowed to do in more highly cultivated districts. Hence the Crow has a continual feast on fresh eggs and young chickens. He knows where the out-lying hen's nests are, perches in the neighborhood and waits for hours for biddy to be delivered of her egg. When she leaves the nest Mr. Crow loses no time in anticipating the owner of the premises.

Sticking his bill into the shell he may be seen flying with it across the field. piles of the shells may be found under their nests. Nests carefully hid away and so escaping the eye of the good house dame, are not infrequently found by watching the black thief. The turkey's nest, carefully bushed in some remote pasture, can be detected in like manner. Not only are young chickens carried away as delicate morsels, to be devoured along with eggs, by the young in the nest, but the Crow will alight on the back of a large hen, peck out her brain, strip off the skin and devour the inside—entrails, etc. If driven away he will return to his repast, and finally consume the whole.

The terrapin or box-turtle, strictly a dry-land reptile and very common in the state of Maryland and southward, is a very useful insectivorous feeder. This delicate piece of flesh the Crow has learned to appreciate, and pecking a hole in the back, cleans out the shell, leaving not even the blood nor ligaments fastening the body to the neatly closed house.

An item of mischief not commonly known, is the feeding of this species on the berries of poisonous vines and shrubs in winter.—the poison ivy and poison sumac for instance, thus disseminating these noxious growths along the fences and about the swamps and pastures. This has been well brought out by the Agricultural Department in its late reports.

It is now time to inquire as to the good to be set down to the Crow's credit, over against all the above category of evil-doing.

Beyond question the Crow is somewhat insectivorous. Visiting the newly mown fields, while the hay is yet drying, they will give chase to the myriads of grasshoppers abroad at such times, and literally fill themselves. They also hunt the ground where hay and straw-stacks have been removed, and where

the muck worm (*Læchnostoma fusca*) eventuating in the well known June bug, and very destructive to the roots of certain garden and fruit products, is abundant. These they capture with great relish, also following the plow which turns these grubs up in rich ground. A certain proportion of beetles are also found in his stomach.

Those who examine the Crows in winter, cannot fail to be impressed with their scanty bill of fare. One finds certain poisonous seeds, as above noted, a few seeds of the wild grape, refuse of street droppings, and frequently nothing at all. One is led to feel that the winter is mainly a long fast, in which the Crows which gyrate about the fields and the pines, must draw upon the flesh stored during the more propitious part of the year.

We must not omit to give the Crow his due as a carrion feeder, thus helping out the Turkey Buzzard in the more southerly regions of our country.

Careful students will discover that it is very difficult to make out a case in our big blackbird's favor. While we would not annihilate them, there can be little doubt that we have very many more of his kind than we need.

J. H. LANGHLE.

A Disastrous Season on Pelican Island.

It was with great pleasure that I read Dr. Gibbs's excellent article regarding the Brown Pelican in Florida, and elsewhere, with a description of a visit to Pelican Island on Indian River in the March issue of OÖLOGIST. I was so much interested in the subject in question that I cannot resist the temptation of sending you a few notes on my visit to the Island where I found things in a peculiarly unsatisfactory state, to myself at least, for I had expected a fine opportunity of studying their nesting habits, and I think that I may rightly say that the birds themselves fully ap-

preciated the situation, for several local sailors informed me that the Pelicans had been very uneasy in their actions for a week or more previous to my visit.

It seems to me that readers of the Oölogist would derive much more benefit from an able article regarding any species if other observers in various localities would add such points of peculiar interest, in regard to the same species as they may have observed, for publication in a near issue. In this way we would have a condensed and comprehensive study of the rarer and more isolated species, which most of us are not able to study for ourselves, while our attention is still attracted to them by the first article in a late issue. Therefore I trust that Dr. Gibbs will pardon this seeming trespass upon his subject. I hope we may very soon see the further notes on the same subject, which he promised to furnish us "if requested."

In February 1885 our party of four from Michigan, left Titusville in the cruising yacht, the "Orient" and proceeded south on Indian River for several days until we neared the locality inhabited by the Pelicans. It was a several hours run out to the Island, and as the yacht approached from the west, the birds on that side of the Island became very uneasy and many took flight, but as we neared shore in our small boat, all on that side of the Island rose. But we will proceed to observe the very different circumstances from those noted by Dr. Gibbs. The water had risen several feet higher than had been known for many years, a short time before, and the nests on the ground had been floated away and the great white eggs, wagon-loads of them, were strewn promiscuously over the entire south half of the Island, in some places being left in wind-rows, as it were, by the receding water. All were spoiled. Oh! how the collector might

wish them in sets and distributed among the cabinets of the land where they would be of some use. We see, then, that at least for once the collector is not the worst enemy of their nests on Indian River. The only occupied nests, which at this time contained young, were in the stunted Mangroves at the North end of the Island.

These young were truly loathsome in their appearance, as awkward as squabs hissing and tumbling about on the rude platforms of sticks and weeds, and surrounded with dung and fishes in various stages of decomposition, from which a fearful stench arose. Most of the adults were rather shy but those having young perched upon the dead Mangrove stubs and allowed an approach, at times, to within thirty feet or even less.

As we left the Island we noticed a fine specimen of this species floating listlessly upon the water apparently sick, though still sitting erect. We approached easily capturing it, and found that it had captured and stored in its pouch a salt-water Cat-fish weighing about two pounds. The fish, probably accidentally in struggling, had thrust its so-called horns, on either side of the body, through the skin on both sides of the pouch and there the poor bird was with the obnoxious fish permanently lodged in its throat. With some difficulty he was removed, but I fear the bird would not recover from its weakness. Thus we see that Nature affords revenge at times to even her lowest creatures.

At Lake Worth, another lagoon on the Atlantic coast, ten miles south of Jupiter Inlet, the southern terminus of Indian River, it was a very common sight to see thirty or forty Pelicans sitting on a sand-bar, pruning their feathers, from which company members would occasionally leave on a fishing expedition near by. They would first fly high above the water and upon locating

a school of fish would turn back soaring along about three feet above the surface, then suddenly throwing their wings back, would pitch head foremost into the water, as does the Belted Kingfisher, becoming entirely submerged. If the fish was a rather large one it would be brought to the surface and stored in the capacious pouch while the bird rested on the water as would a duck or goose.

I was informed that there was no rookery of these birds at Lake Worth, those found there must have come either from the Indian River colony, a great distance north, or from colonies which I understand inhabit various of the Florida Keys. In either case long distances must have been traversed.

L. WHITNEY WATKINS,
Manchester, Mich.

Remarkable Tenacity of Life.

The following item of oölogy may or may not be useful or interesting to somebody, but to me it seems worthy of mention.

A pair of domestic Pigeon's eggs, which it was supposed had been abandoned, and which were deemed to be bad, were taken from the nest and one of the eggs was thrown upon the ground with considerable force. The shell burst open, and there bleeding and struggling was the embryonic inhabitant with head in the shell, and the end part entirely exposed. The first impulse was to destroy the young pigeon, but upon second thought the broken shell was tenderly picked up, and replaced together with the good egg in the nest. This was on the 4th of March 1894. Today, March 17th that nest contains two bonneing, and apparently entirely sound, young pigeons. This egg was not simply dropped—it was thrown with force upon the ground.

HENRY KNAUS,
Chicago, Illinois.

Notes From the Midwinter Fair.

As the western readers of the OÖLOGIST enjoy the interesting descriptions of the World's Fair which appeared in its columns, I thought perhaps a few words concerning our Midwinter Exposition might interest our eastern friends and I have decided to tell them in a general way about it.

First, let me say we have a great Fair; not as large as Chicago's, but one in which a person can easily spend a week or longer according to his method of sight-seeing. It is a Fair which can be comprehended and therefore appreciated. In less than six months from the time the idea of holding a Fair was decided upon, a hundred beautiful buildings had been erected and the Fair opened to the throng of eager visitors.

Probably California is the only state in which a "Midwinter" Fair could be successfully held, because of its equable climate. During this month, February, all about the grounds flowers are blooming and tropical palms are waving in the balmy breeze. The Fair has been arranged with an eye to the picturesque, and this makes a walk through the grounds a continual pleasure. The Grand Court is adorned with a lofty electric tower and an electric fountain of beautiful design and finish. About the Grand Court are the main buildings; the Art Palace, Administration, Horticultural, Manufactures and Liberal Arts, and Machinery.

All the main buildings and concessions are finished in attractive colors that catch the eye. Many of the concessions that appeared at Chicago have been reproduced here. We have no Midway Plaisance, but the shows which constituted that interesting part of the Fair, are scattered throughout the grounds. A Firth Wheel, corresponding to the Ferris Wheel, is one of the most striking objects on the grounds. But we have one concession that is

strictly western. This is the '49 Mining Camp and a most interesting exhibit it is too: one representing early days. As we walk along one of the main streets, a novel sign on the side points out the way to the Mining Camp. A walk over a picturesque trail through a grove of pines leads us to the entrance of the Camp. We pay our quarter and enter the main street, which is lined on both sides with genuine miners' cabins, brought from the mountains. These all contain relics of the "days of old, the days of gold and the days of '49." A familiar mule train slowly winds its way along the street at intervals, and is in turn followed by the rumbling stage. The cabins are too numerous to mention. One bears a sign informing us that "Keno" is played within. Another is the office of the "Pepper Box" which is supposed to disseminate the news amongst the inhabitants of the camp. Then again comes the stage office from whence departs the stage for such noted places as Bad Man's Gulch, Red Dog, Yankee Jims, Shirt-tail Canon and other places of equally euphous names.

At the head of the main street is an immense painting representing Mount Shasta, and it is apparently a mile away, and is as clever an illusion as I have seen.

As one approaches the grounds he is confronted by the massive Firth wheel, which towers above the surrounding buildings majestically. From every spire and turret floats a streamer of brilliant hue or else the Stars and Stripes. Upon entering the grounds it is difficult to decide where we shall begin our sight-seeing. Close at hand are the Colorado Gold Mine, in which the complete process of mining is shown; the Mirror Maze, Dante's Inferno, the most hideous portion of which is doubtless the building which is modelled after a dragon, for I am informed the interior is a "fake;" the Hawaiian Volcano,

which is very instructive and realistic, with its lakes of lava, and numerous other attractions. Possibly one of the most interesting concessions is the Scenic Railroad, which everyone is tempted to try once at least. It is no uncommon sight to see a dusty grauger occupying the front seat, his teeth set, as the train rushes down the steep grade, his long locks floating in the breeze.

In other parts of the Fair Grounds are the Indian and Arizona Villages, Boon's Arena of Wild Animals, Col. Hafford's Arizona Museum and a score of other private concessions. It was my fortune or rather misfortune to visit the Arizona Museum, which is advertised to contain matchless collections of birds, and stuffed animals. There are hundreds of specimens that the veriest amateur would be ashamed to own. No pretense is made to place the birds in a life-like attitude, but half-stuffed they are nailed through the back onto the wall. A "Gila monster" was formerly kept on the outside and the showman never tired of extolling its poisonous propensities, but it has since shuffled off this mortal coil, and left Col. Hafford to his grief.

The private concessions are of course a secondary matter to the sight-seers, and the five main buildings afford sights for many day's study. In the Fine Arts Building is a collection of rare works of art, many of which are from the brushes of western artists. The Mechanics Arts Building is filled with mechanical contrivances various exhibits, and an extensive display of California and Pacific Coast ores. Here the Midwinter Fair souvenirs are coined before the visitor's eyes. The Horticultural Building is filled with a most interesting exhibit of California products, while the Manufactures and Liberal Arts building contains the government, Wells Fargo & Co's. as well as many other valuable exhibits, besides a

vast amount of manufactured products.

In the centre of the Grand Court are the Electric Fountain and Electric Tower, both of which lend dazzling brilliancy to the Grand Court and the grounds at night.

A number of the counties of the State have erected handsome buildings in which to display their products, and these are a source of great interest to Eastern visitors. The products exhibited are typical of the various sections from which they come. Santa Clara County's prize horse and rider which attracted so much attention at Chicago has been reproduced and each county has some piece composed of its products. Visitors will do well to not overlook the County exhibits, and all who have a taste for our delightful hobby of ornithology will, as one ornithologist expressed it "head straight for the Alameda Co. Building as soon as they get inside the gates." In this building in an alcove just above the entrance, upstairs, will be found the exhibit which was prepared by Californian Ornithologists, a full account of which will constitute my next rambling letter.

GOLDEN WEST

Accidental Death of Birds

I notice in the OÖLOGIST an article on the accidental death of birds which recalls to my mind an incident that occurred at Metamora, Ill. in my boyhood days in which five large Mallard Ducks lost their lives from pure accident. It was late in the Fall when a wire had been run across the street perhaps 50 or 60 feet high on which to hang the American Flag during the day. There was a tall flag pole on the square also on the top of which was a large loop of wire. The night was dark and the wind blew fearfully during a portion of the time and it was during that period of year when the Ducks were flying plentifully. The wire was not far from my father's

office and when I went out in the morning I found four dead Ducks in the road not far from the wire with unmistakable evidences upon their bodies as to the cause of their death. They had flown or been blown in the darkness of the night against the outstretched wire and killed. On looking up at the pole I saw another dead one hanging with his neck and head entangled in the loop of wire at the top. He had evidently been killed in the same way.

C. LEONARD WHITEMIRE, (Rush '85)

Waverly, Ia.

Western New York Naturalists' Association.

The semi-annual meeting of the Western New York Naturalists' Association was held at Rochester, March 17th in the rooms of the Young Men's Christian Association. Two sessions were held.

The first session was held for the transaction of business. E. J. Botsford was elected to fill the vacancy in the executive board caused by the resignation of E. B. Peck. Three new members were voted into the association and designs were accepted for the official seal and badge of the organization. A petition was prepared asking the Legislature to offer a bounty for the killing of English Sparrows.

At the second session the exhibit of Indian relics made by L. V. Case, of birds eggs, by B. S. Bowditch, and of eggs, shells and corals by E. H. Short were examined and discussed.

The Naturalists' Association was organized in September, 1892, and since that time has been steadily growing. The last meeting was well attended, representatives being present from all portions of Western New York. The Ed. of the OÖLOGIST had anticipated much pleasure in meeting with "the boys" but unexpected business engagements prevented.

THE OÖLOGIST.

A Monthly Magazine Devoted to
OÖLOGY AND ORNITHOLOGY.

F. H. LATTIN, & CO., Publishers.
ALBION, N. Y.

FRANK H. LATTIN, WALTER F. WEBB,
Editors.

Correspondence and Items of interest to the student of Birds, their Nests and Eggs, solicited from all.

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F. H. LATTIN & CO.,
Albion, Orleans Co., N. Y.

*. Articles, Items of Interest and Queries for publication should be forwarded as early in the month as possible.

ENTERED AT THE POST OFFICE AT ALBION, N. Y., AS SECOND-CLASS MATTER.

You Are a Judge.

Your decision must be mailed us not later than the *first* day of May. Write on back of a postal card the five articles which *you* have decided to be the *most valuable, instructive and interesting* in this number of OÖLOGIST and mail to us. Number the articles in the order which you think the prizes should be awarded.

We give our Judges five prizes having an aggregate value of over \$5, one to each of the five whose decisions are nearest the final award of Mss. prizes.

During 1894, as in 1893, the Publishers of the OÖLOGIST will distribute over \$300 worth of desirable prizes among the patrons, contributors and readers, of the OÖLOGIST. Particulars in full next month.

Messrs. Frederick Warne & Co., New York, will immediately commence the publication of the "Library of Natural History," the first installments of which will compose The Royal Natural History, to be edited by Mr. Richard Lydekker, B. A., F. G. S., F. Z. S., who is already well known to naturalists as an able scientist and the author of several works on Mammals, etc. This will form, when complete, an entirely new General Natural History, thoroughly abreast of the age; full, accurate and readable, anecdotic, and conveniently arranged. It will contain some 1,600 illustrations by the most eminent draughtsmen of the day, and a series of 72 magnificent colored plates. This work will occupy 36 monthly numbers, and will be sold at 50 cents a number. Full details will be contained in an illustrated prospectus now in hand.

We are indebted to Messrs. J. Parker Norris and J. Parker Norris Jr., of Philadelphia, for a catalogue of their Oölogical Collection. It has twice been the privilege of the Editor to "go through" and "feast his eyes" on this wonderful collection and he has long intended and still intends to "some-time" have more to say in relation to it. For the present, however, the following taken from the preface of the catalogue must suffice: "This collection at the present date—January 1, 1894—consists of 573 species, 5002 sets and 20,388 eggs. It was the desire of its owners to procure full and complete series rather than to obtain new species, hence the large number of sets in proportion to the number of species. It is especially strong in series of Warblers, Hawks, and Owls, to which particular attention is invited. No effort has been made to obtain the eggs of the Water Birds as it is practically impossible to secure a good representation of them. Ridgway's Nomenclature has been retained as far as possible, as the collection was already numbered and arranged in accordance with it long before the A. O. U. Nomenclature was published."

FEBRUARY CONTEST.

Seventy-four Judges.

Prize-winners and credits received by each were as follows:

1. Some Winter Bird Notes, 331
2. George Newbold Lawrence, 193.
3. The Spring and Summer Birds of Central Park, New York, 177
4. A Letter from John B. Hindtime, 140.
5. Watching Flickers, 137.
6. Great Horned Owl, 74.

Many of the Judges were at loss to know as to whether the biographical sketch of Mr. Lawrence or the letter from John B. Hindtime were in the contest or not, and as a result only 45 gave the former article votes and only 44 the latter, hence the number of credits received for these articles was indeed flattering, considering that two-fifths of the Judges did not consider them in the contest and gave them no credits.

The sketch *should not* and the letter *should* have been considered in the competition, but inasmuch as we failed to make the announcement at the time the articles were printed—we settled the question as follows: In awarding Mss. prizes the sketch was rejected, but in awarding the Judges it was allowed, and the prize-takers were the ones who voted for the first five of the articles mentioned.

The Judges' prizes were awarded as follows:

1. No. 51—Cyrus Crosby, Crosby, N. Y., 1, 2, 3, 5, 4.
2. No. 7—John Howe Slater, Webster, Mass., 1, 3, 2, 4, 5.
3. No. 44—Raymond C. Osburn, Vanatta, O., 1, 3, 2, 5, 4.
4. No. 18—Ed. Doolittle, Painesville, O., 1, 2, 5, 4, 3.
5. No. 8—Fred W. Parkhurst, Bath, N. Y., 1, 3, 5, 2, 4.

The following also named the first five articles:

- No. 10—J. F. Parkhurst, Ills.
- No. 13—Harold Holland, Ills.

- No. 14—C. H. Dickinson, Minn.
 - No. 23—W. G. Coleman, Iowa.
 - No. 26—Jay G. Smith, N. Y.
 - No. 17—Otto Grady, Ky.
 - No. 34—Erle Morton, Kans.
 - No. 36—Wm. A. Achilles, Tex.
 - No. 42—C. H. Finne, Ark.
 - No. 45—W. D. Waltman, Colo.
 - No. 47—Geo. W. Dixon, So. Dak.
 - No. 57—Carleton R. Ball, Ia.
 - No. 71—N. M. Moran, Calif.
- All prizes were mailed on March 1st.

MARCH CONTEST.

One Hundred Judges.

Prize winners and credits received by each were as follows:

1. Nesting Habits of the Brown Pelican in Florida, 469.
2. Scenes from the Life of Alexander Wilson, 284.
3. Evening Grosbeak, 231.
4. Maryland Birds that Interest the Sportsman, 217.
5. My Friend, Hairy, 167.

The Judges prizes were awarded as follows:

1. No. 6, Robt. McPherson, North Adams, Mass., *exact*.
2. No. 20, Otto Grady, Ludlow, Ky., *exact*.
3. Walton Mitchell, St. Paul, Minn., 1, 2, 4, 3, 5.
4. Charles Meyers, Elmore, Ohio, 1, 2, 4, 3, 5.
5. Leighton A. Hawley, New York City, 1, 2: 4, 3, 5.

The following Judges also rendered decisions identical to the ones winning prizes 3, 4 and 5, and to each we awarded a copy of the Standard Catalogue.

- No. 33, Erle Morton, Kans.
- 49, Tillman Bibbs, Tex.
- 57, "Collector" Jackson, Minn.
- 67, H. L. Heaton, Kans.
- 76, F. A. Colby, Neb.
- 90, Frank D. Weeks, Oregon.
- 98, Harvey Hoskins, Oregon.

Twenty-eight other Judges named the prize winning articles.

All prizes were mailed on April 7th.

OUR ANNUAL "EASTER" OFFER!

We quote the following Liberal Offers, which will hold good at our HEADQUARTERS, Albion, N. Y., until May 1st and at our Western Branch, No. 3571 Cottage Grove Ave., Chicago, Ills, until April 25th ONLY, on eggs of the species mentioned.

Orders of 50c. or over sent prepaid, under that amount 5c. must be added for postage and packing.

For \$ 1.00	you can select Eggs to the amount of \$ 1.50
For 2.00	" " " " 3.50
For 3.00	" " " " 6.00
For 5.00	" " " " 11.25
For 10.00	" " " " 25.00
For 25.00	or over, 10 per cent. discount from \$10.00 rates

All specimens will be carefully packed in strong tin or wooden boxes and sent at purchaser's risk by mail, our at or risk and purchaser's expense by express.

SECOND-CLASS SPECIMENS can be furnished of most of the species at one-half the price of a first-class one.

A POINTER—Collectors well know how readily they can exchange some cheap eggs, not found in their locality with local collectors for specimens worth many times as much. Many wideawake collectors will doubtless lay in a large supply for this purpose.

Make remittances in most convenient manner. Address,

F. H. LATTIN & CO., ALBION, N. Y.,
OR, 3571 COTTAGE GROVE AVE., CHICAGO, ILLS.

PREMIUMS.

On May 1st we close our Chicago Branch and our '94 "Easter" offer is made more in order to reduce our stock there than for any other purpose. Hence in addition to the above discounts, we will include as a premium with all orders for eggs sent us at Chicago, and received by us there on or before April 25th—not a single day later—additional eggs to the amount 10cts at full list prices, either of your or our selection, for every dollar you may send us.

AMERICAN EGGS, SINGLES.

Orders for the following Eggs can be sent us at either Albion or Chicago.

Holboell's Grebe.....	50	Noddy.....	50	Snowy Heron.....	15
Horned Grebe.....	20	Fulmar.....	75	Reddish Egret.....	35
American Eared Grebe.....	15	Manx Shearwater.....	1 00	Louisiana Heron.....	12
St. Domingo Grebe.....	50	Audubon's Shearwater.....	1 50	Little Blue Heron.....	12
Pied-billed Grebe.....	10	Fork-tailed Petrel.....	2 00	Green Heron.....	12
Black-throated Loon.....	1 50	Leach's Petrel.....	20	B'k-crowned Night Heron.....	12
Puffin.....	20	Booby.....	1 75	Y'w-crowned Night Heron.....	20
Large-billed Puffin.....	00	Cormorant.....	50	King Rail.....	20
Cassin's Auklet.....	1 50	Farallone Cormorant.....	50	Clapper Rail.....	12
Black Guillemot.....	25	Brandt's Cormorant.....	25	Virginia Rail.....	20
Murre.....	20	Baird's Cormorant.....	25	Sora.....	10
California Murre.....	20	American White Pelican.....	35	Corn Crake.....	20
Parasitic Jaeger.....	50	California Brown Pelican.....	1 00	Purple Gallinule.....	25
Long-tailed Jaeger.....	1 50	Man-o'-war Bird.....	1 00	Florida Gallinule.....	10
Kittiwake.....	40	Red-breasted Merganser.....	50	European Coot.....	15
Iceland Gull.....	1 25	Hooded Merganser.....	2 00	American Coot.....	08
Great Black-backed Gull.....	60	Mallard.....	20	Wilson's Phalarope.....	75
Western Gull.....	30	Florida Duck.....	1 00	American Avocet.....	50
Herring Gull.....	20	Gadwall.....	75	Black-necked Stilt.....	50
American Herring Gull.....	20	European Teal.....	20	European Woodcock.....	1 75
California Gull.....	30	Blue-winged Teal.....	20	European Snipe.....	25
Ring-billed Gull.....	30	Shoveller.....	50	Wilson's Snipe.....	1 50
Laughing Gull.....	20	Scaup Duck.....	75	Western Willet.....	50
Franklin's Gull.....	35	Barrow's Golden-eye.....	1 00	Bartramian Sandpiper.....	35
Caspian Tern.....	50	Harlequin Duck.....	1 50	Spotted Sandpiper.....	15
Royal Tern.....	40	White-fronted Goose.....	1 00	Golden Plover.....	40
Cabot's Tern.....	40	Whooping Swan.....	1 50	Killdeer.....	20
Forster's Tern.....	10	Whistling Swan.....	2 50	Wilson's Plover.....	25
Common Tern.....	08	White-faced Glossy Ibis.....	1 00	Bob-white.....	10
Arctic Tern.....	10	Wood Ibis.....	1 00	Florida Bob-white.....	15
Roseate Tern.....	15	American Bittern.....	75	Texas Bob-white.....	10
Least Tern.....	08	Least Bittern.....	20	Mountain Partridge.....	75
Sooty Tern.....	25	Great Blue Heron.....	25	California Partridge.....	10
Bridled Tern.....	1 00	American Egret.....	30	Valley Partridge.....	20

Our stock is very low on many species named on this page. Hence, ALWAYS name a few extras that we can send as substitutes in case we are out of the species ordered. Address all orders to

F. H. LATTIN & CO., Albion, N. Y.; or,
3571 Cottage Grove Ave., Chicago,

Sooty Grouse	85	Phoebe	04	Blue Grosbeak	20
Ruffed Grouse	15	Say's Phoebe	15	Indigo Bunting	08
Willow Ptarmigan	1 00	Black Phoebe	15	Lazuli Bunting	20
Rock Ptarmigan	1 00	Wood Pewee	12	Painted Bunting	10
Prairie Hen	20	Western Wood Pewee	20	Sharpe's Seed-eater	1 00
Sage Grouse	50	Western Flycatcher	20	Dickcissel	05
Chachalaca	75	Acadian Flycatcher	15	Lark Bunting	25
Red-billed Pigeon	1 00	Little Flycatcher	25	Scarlet Tanager	25
White-crowned Pigeon	1 00	Traill's Flycatcher	15	Summer Tanager	25
Mourning Dove	03	Least Flycatcher	15	Purple Martin	12
White-fronted Dove	35	Prairie Horned Lark	15	Cliff Swallow	03
White-winged Dove	20	Desert Horned Lark	20	Barn Swallow	05
Ground Dove	30	Ruddy Horned Lark	35	Tree Swallow	15
Mexican Ground Dove	50	American Magpie	15	Rough-winged Swallow	25
Marsh Hawk	35	Yellow-billed Magpie	35	Cedar Waxwing	10
Cooper's Hawk	30	Blue Jay	04	Phainopepla	35
Harris's Hawk	60	Florida Blue Jay	35	Loggerhead Shrike	08
European Buzzard	40	Blue-fronted Jay	75	White-rumped Shrike	08
Red-tailed Hawk	50	California Jay	25	California Shrike	08
Western Red-tail	60	Green Jay	1 25	Red-eyed Vireo	10
Red-shouldered Hawk	65	American Crow	05	Warbling Vireo	15
Fla. Red-sh'd'd Hawk	1 25	Florida Crow	35	White-eyed Vireo	15
White-tailed Hawk	50	Fish Crow	35	Bell's Vireo	15
Swainson's Hawk	1 00	Bobolink	25	Prothonotary Warbler	25
Red-winged Hawk	2 00	Western Bobolink	35	Worm-eating Warbler	00
Gray Sea Eagle	6 00	Cowbird	03	Blue-winged Warbler	1 50
Gryfalcon	3 00	Dwarf Cowbird	10	Golden-winged Warbler	75
Duck Hawk	30	Red-eyed Cowbird	03	Lutescent Warbler	75
Kestrel	20	Yellow-headed Blackbird	02	Parula Warbler	20
American Sparrow Hawk	25	Red-winged Blackbird	02	Yellow Warbler	05
Desert Sparrow Hawk	1 00	Bicolored Blackbird	15	Chestnut-sided Warbler	15
Audubon's Caracara	1 00	Tricolored Blackbird	15	B'kthroated Gr'n Warbler	50
American Osprey	30	Meadowlark	10	Prairie Warbler	30
American Barn Owl	75	Western Meadowlark	10	Louisiana Water-Thrush	50
American Long-eared Owl	1 50	Hooded Oriole	50	Maryland Yellow-throat	12
Short-eared Owl	1 00	Arizona Hooded Oriole	35	Western Yellow-throat	25
Barred Owl	1 00	Orchard Oriole	06	Yellow-breasted Chat	08
Screech Owl	50	Baltimore Oriole	06	Long-tailed Chat	10
Florida Screech Owl	50	Bullock's Oriole	10	Hooded Warbler	55
Texas Screech Owl	50	Brewer's Blackbird	03	American Redstart	10
California Screech Owl	50	Purple Grackle	05	White Wagtail	15
Great Horned Owl	1 00	Florida Grackle	10	Sage Thrasher	50
Western Horned Owl	1 00	Bronzed Grackle	05	Mockingbird	05
Hawk Owl	1 00	Great-tailed Grackle	15	Catbird	02
Burrowing Owl	15	Boat-tailed Grackle	15	Brown Thrasher	03
Florida Burrowing Owl	1 50	Pine Grosbeak	1 25	Sennett's Thrasher	15
Elf Owl	1 00	Purple Finch	15	Curve-billed Thrasher	15
Ani	1 00	House Finch	05	California Thrasher	20
Grove-billed Ani	1 00	Redpoll	85	Bendire's Thrasher	75
Road-runner	25	American Goldfinch	50	Cactus Wren	12
Yellow-billed Cuckoo	10	Western Goldfinch	10	Rock Wren	50
California Cuckoo	20	Arkansas Goldfinch	10	Carolina Wren	10
Black-billed Cuckoo	15	Lawrence's Goldfinch	20	Bewick's Wren	25
Belted Kingfisher	50	Lapland Longspur	75	Baird's Wren	25
Hairy Woodpecker	50	McClown's Longspur	1 00	House Wren	05
Southern Hairy "	1 00	Vesper Sparrow	05	Parkman's Wren	15
Downy Woodpecker	20	Western Vesper Sparrow	15	Western House Wren	08
Red-cockaded Woodpecker	1 50	Savanna Sparrow	10	Long-billed Marsh Wren	05
Baird's Woodpecker	1 00	Grasshopper Sparrow	20	White-breasted Nuthatch	35
Yellow-bellied Sapsucker	50	W. Grasshopper Sparrow	20	Brown-headed Nuthatch	25
Pileated Woodpecker	1 00	Sharp-tailed Sparrow	35	Tufted Titmouse	35
Red-headed Woodpecker	08	Lark Sparrow	05	Texas Tufted Titmouse	75
California Woodpecker	40	Western Lark Sparrow	05	Plain Titmouse	50
Lewis's Woodpecker	35	Gambel's Sparrow	15	Chickadee	12
Red-bellied Woodpecker	25	White-throated Sparrow	35	Carolina Chickadee	15
Golden-fr'ted Woodpecker	50	West'n Chipping Sparrow	10	Mountain Chickadee	50
Flicker	03	Field Sparrow	03	Wren-tit	50
Red-shafted Flicker	10	Western Field Sparrow	25	Bush-Tit	25
Northwestern Flicker	25	Slate-colored Junco	20	Verdin	35
Merrill's Parauque	2 50	Black-throated Sparrow	35	Blue-gray Gnatcatcher	20
Nighthawk	40	Song Sparrow	02	Wood Thrush	06
Western Nighthawk	40	Heermann's Song Sparrow	10	Wilson's Thrush	12
Florida Nighthawk	1 00	Samuel's Song Sparrow	05	Russet-backed Thrush	15
Texas Nighthawk	40	Rusty Song Sparrow	35	Olive-backed Thrush	35
Chimney Swift	12	Swamp Sparrow	12	Hermit Thrush	30
Ruby-throated Hummer	50	Texas Sparrow	50	Red-winged Thrush	25
Black-chinned Hummer	50	Towhee	10	American Robin	03
Costa's Hummingbird	75	Spurred Towhee	20	Western Robin	10
Anna's Hummingbird	50	Oregon Towhee	25	Wheatear	10
Scissor-tailed Flycatcher	10	California Towhee	10	Bluebird	02
Kingbird	03	Abert's Towhee	75	Western Bluebird	12
Arkansas Kingbird	06	Cardinal	05	Mountain Bluebird	12
Cassin's Kingbird	25	Gray-tailed Cardinal	1 50	English Peasant	25
Crested Flycatcher	12	Texas Cardinal	35	European Goldfinch	20
Mexican Cr'ted Flycatcher	40	Rose-breasted Grosbeak	10	English Sparrow	02
Ash-throated Flycatcher	25	Black-headed Grosbeak	15	European Tree Sparrow	15

MISCELLANEOUS.

Gopher	35	Hammerhead Shark	15	Crocodile	1 00
Skate	05	Nurse Shark	50	Mud Turtle	10
Shark	10	Egg case of Periwinkle ..	25	Musk Turtle	15
Devil-Fish	10	Fossil Fish Eggs, per 12.	10	Snapping Turtle	15
Hummingbird nests 10 to 50c.		Alligator	35	Ostrich (Hole in end)	1 50

each according to condition and beauty.

FOREIGN EGGS. SINGLES.

All orders for the following Foreign Eggs must be sent us at our Chicago Branch.

Lesser Kestrel	\$ 30	Calandra Lark	50	Hobby Merlin	20
Sparrow Hawk	20	Short-toed Lark	12	Egyptian Vulture	1 50
Marsh Harrier	25	Gt. Black Woodpecker ..	75	Carrión Crow	20
Montague's Harrier	50	Cuckoo	50	Chiff Chaff	05
Swallow	05	Cirl Bunting	20	Stone Chat	10
Nuthatch	20	Yellow Bunting	05	Rook	10
Wren	05	Black-headed Bunting ..	10	Back-backed Heron	25
Fire-crested Wren	40	Willow Warbler	05	Black Stork	75
Sedge Warbler	05	Robin	02	White Stork	1 50
White-throat	05	Common Sandpiper	15	Quail	10
Golden-crested Kinglet	15	Common Snipe	25	Ring Ouzel	05
Whinchat	10	Water Rail	30	Gyr Falcon	6 00
White-spotted Blue-throat ..	75	White-fronted Goose	1 00	Long-eared Owl	35
Brambling	25	Moorhen	15	Tawny Owl	50
Missel Thrush	05	Sociable Plover	30	Little Owl	40
Song Thrush	03	Sand Martin	03	Redshanks	25
Blackbird	03	Tree Creeper	05	Stock Dove	15
Dipper	15	Capercaille	50	Great-crested Grebe	50
Pied Flycatcher	15	Pink-footed Goose	1 00	Chukkar Partridge	20
Red-backed Shrike	10	Ring Dove	10	Griffon Vulture	2 50
Jay	12	Tu tile Dov	05	Arabian Vulture	5 00
Magpie	08	Black Cap	05	PHILIPPINE EGGS.	
Jackdaw	08	Great Tit	20	Black-headed Weaver-bird ..	50
Greenfinch	05	Blue Tit	15	2nd class	15
House Sparrow	03	Marsh Tit	20	Bul-bul	75
Bullfinch	10	Kingfisher	15	2nd class	25
Lesser Redpoll	20	Barbary Partridge	10	Sun Bird	2 00
White-winged Lark	40	Red-leg Partridge	15	Chinese Oriole	1 00

AMERICAN EGGS

in Sets with Data. For Sale at our Headquarters. Orders for the following sets should be sent us at Albion, N. Y., only.

Puffin, 1	Red-tailed Hawk 4	White-rumped Shrike 6
California Murre, 1	Red-shouldered Hawk 2	Red-eyed Vireo 3
Great Black-backed Gull, 2-3	Swainson's Hawk 3	Warbling Vireo 4
Ring-billed Gull, 3	Broad-winged Hawk 3	Chestnut-sided Warbler 4
Mew Gull, 2-3	American Osprey 3	American Redstart 3-4
Cabot's Tern, 3	Belted Kingfisher 7	Brown Thrasher 4
Forster's Tern, 3	Hairy Woodpecker 6	California Thrasher 3
Common Tern, 3	Ruby-throated Hum'g bird n-2	House Wren 5
Sooty Tern, 1	Crested Flycatcher 4	Long-billed Marsh Wren 5
Bridled Tern 1	Wood Pewee n-3	Chickadee 9
Noddy 1	Prairie Horned Lark 2-4	Wood Thrush 4
Fulmar 1	Blue Jay 4-5	FOREIGN EGGS.
Manx Shearwater 1	American Crow 5	Red-breasted Merganser 5-7
Audubon's Shearwater 1	Meadowlark 5	Widgeon 5-9
Sto. my Petrel 1	Western Meadowlark 5	Scoter 5
Leach's Petrel 1	Baltimore Oriole 5	Whooping Swan 3
Yellow-billed Tropic Bird 1	Bronzed Grackle 5	Curlew 3-4
Booby 1	House Finch 3	Golden Plover 4
Double crested Cormorant 4	American Goldfinch n-5	Rock Ptarmigan 12
American White Pelican 2-3	Vesper Sparrow 4	Gryfalcon 2-4
Man-o'-war Bird 1	Western Lark Sparrow	Duck Hawk 4
Wood Ibis 4	Field Sparrow 4	Kestrel 5
Least Bittern 4	Song Sparrow 5	Numidian Crane 1
Louisiana Heron 5	Swamp Sparrow 4	Cinereus Crane 1-2
Little Blue Heron 4-5	Towhee 3	Egyptian Vulture 2
Green Heron 5	Rose-breasted Grosbeak 3	Griffin Vulture 2
Virginia Rail 8	Lazuli Bunting 4	Quail 10
Chachalaca 3	Sharpe's Seed-eater n-3	Red legged Partridge 10
White-crowned Pigeon	Scarlet Tanager 4	Orient Eagle 2
Cooper's Hawk 3-4	Bank Swallow 4	Rough-footed Eagle
Harris's Hawk 3	Cedar Waxwing 4	Red Grouse 10

Our stock is very low on many species named on this page. Hence, ALWAYS name a few extras that we can send as substitutes in case we are out of the species ordered. Address all orders to

F. H. LATTIN & CO., 3571 Cottage Grove Ave., Chicago.

Albion, N. Y.; or,

AMERICAN EGGS

in Sets with data. For sale at our Chicago Branch. Orders for the following sets will be filled from our Chicago Store only.

St. Domingo Grebe 4	Fla. Screech Owl 3	Gray-tail Cardinal 3-4
Pied-bill Grebe 6-7	Texas Screech Owl 4	Texas " 4
Black-throat Loon 2	Calif. " " 4	Spurred Towhee 3
Puffin 1	Chachalaca 3	Oregon " 3-4
Large-bill Puffin 1	Red-bill Pigeon 1	California " 3-4
Black Guillemot 2	White-crown Pigeon 2	Albert's " 2
Murre 1	Mourning Dove 2	Rose-breasted Grosbeak 3-4
Parasitic Jaeger 2	Ground " 2	Black-headed " 2-3
Iceland Gull 2	Mex. Ground Dove 2	Blue " 2-3
Gt. Blk. back Gull 2	Yellow-billed Cuckoo 4	Indigo Bunting 3
Herring Gull 2-3	Black-billed " 3-4	Lazuli " 3
Amer. Herring Gull 3	Belted Kingfisher 4-5-6	Sharpe's Seedeater n-3
Ring-bill Gull 3	Merrill's Parakeet 2	Pine Grosbeak (Eng.) 3
Laughing Gull 2-3	Hairy Woodpecker 3	House Finch 4
Franklin's Gull 3	So. " 4	Red-poll 6
Sooty Tern 1	Downy " 4-5-6	American Goldfinch 4-5-6
Noddy " 1	Baird's " 4	Arkansas " 4-5
Bridled " 1	Red-headed " 4	Lapland Longspur 4-5
Fulmar 1	California " 3	McClowns " 4
Manx Shearwater 1	Lewis' " 6	Dickcissel 4
Audubon's Shearwater 1	Red-bellied " 4	Cactus Wren 3
Fork-tail Petrel 1	Golden-fronted Woodpecker 4	House " 6-7
Leach's Petrel 1	Golden-winged " 4-5	White-breasted Nuthatch 6
Farrallone Cormorant 4	Red-shafted " 4-5-6	Chickadee 6
Brandt's " 3	Northwestern Flicker 6-8	Russet-backed Thrush 3-4
Am. White Pelican 2	Night Hawk 2	Vesper Sparrow 4
Man O' War Bird 1	Texas " 2	Grasshopper " 4-5
European Teal 4	Chimney Swift 3-4	Lark " 4
Blue-wing Teal 5-7	Scissor-tailed Flycatcher 4	Chipping " 3-4
Barrows Golden-eye 12	Cassin's Kingbird 5	West. " 3
Scoter Eup. 6	Mex. Crested Flycatcher 4-5	Field " 4
White-faced Glossy Ibis 3	Phoebe 4-5	Song " 4-5
Wood Ibis 4	Wood Pewee 2-3	Mt. Song " 3-4
Least Bittern 6	Western Flycatcher 4	Heer. " 3-4
Reddish Egret 4	Western Wood Pewee 3	Saml's " 3-4
Little Blue Heron 3-4	Little Flycatcher 2-3	Rusty " 4
Green Heron 4-5	Traill's " 2-3	Swamp " 4-5
B. C. Night Heron 4	Least " 3-4	Texas " 4
Corn Crane 7	Prairie Horned Lark 3-4	Purple Martin 4
Amer. Coot 5-6	Fla. Blue Jay 3-4	Cliff Swallow 4
Eng. Snipe 4	Calif. Jay 2-3	Barn " 4
Wilson Snipe 2-3	American Crow 3-4-6	Tree " 4-6
Spotted Sandpiper 4	Starling 4	Bank " 4-5
Curlew 3	Brewer's Blackbird 4-5	White-rumped Shrike 4-6
Bob-white 4	Purple Grackle 3-5	Red-eyed Vireo 2-3
Florida Bobwhite 9	Great-tailed Grackle 3-4	Bell's Vireo 3
Ruffed Grouse 12	Bobolink 4	Yellow Warbler 4
Rock Ptarmigan 5-10	Western Bobolink 4-5	Chestnut-sided Warbler 3
Prairie Hen 12	Red-winged Blackbird 4	Prairie " 2-3
Cooper's Hawk 4	Bi-colored " 4	Yellow-breast Chat 3-4
Harris' Hawk 2	Tri-colored " 4	Long-tailed Chat 4
Red-tail Hawk 1-2	Meadow Lark 4-5	American Redstart 4
Western Red tail 2	Western Meadow Lark 3-4-5	White Wagtail 5
American Osprey 3	Arizona Hooded Oriole 4	Sage Thrasher 5
Long-ear Owl 4-5	Orchard Oriole 4-5	Mockingbird 3-4
Barred Owl 2	Baltimore " 3-4-6	Catbird 4-4
Screech Owl 4	Bullock's Oriole 4-7	Brown Thrasher 4
Great Horned Owl 2	Towhee 3	Sennett's " 4
West. " 2	Cardinal 3-4	California " 3

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While the selection must be left entirely with us, we will, however try and accommodate them as far as possible by sending eggs either native or foreign to their locality: either cheap or high priced ones; or either of water or land species—in fact if they will "hint" about what they mostly desire, we will do as well as we possibly can for them.

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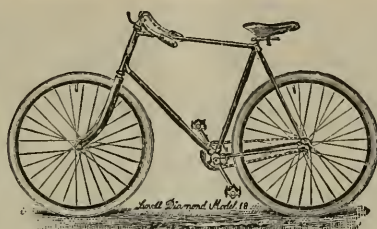
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Our stock is very low on many species named on this page. Hence, ALWAYS name a few extras that we can send as substitutes in case we are out of the species ordered. Address all orders to

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THE OÖLOGIST.

Monthly. 50c. per Year.

VOL. XI. NO. 5.

ALBION, N. Y., MAY, 1894.

WHOLE No. 103

Wants, Exchanges, and For Sales.

Brief special announcements. "Wants," "Exchanges" "For Sales," inserted in this department for 50c per 35 words. Notices over 35 words, charged at the rate of one cent per each additional word. No notice inserted for less than 50c. Terms, cash with order.

"DEALERS" can use these columns at *Regular Advertising rates, only.*

Strictly First-class specimens will be accepted in payment at one-half list rates.

Exchange Cards and Coupons (subscription) will be accepted for "Wants" and "Exchanges" *only* and according to conditions stated thereon.

"I suppose it is hardly necessary for me to say that my adv. in the OÖLOGIST gave me more applications than I could fill. I am more than pleased." J. H. Bowles, Ponkapog, Mass.

OPALS.—I am selling out cheap a small collection of Gems. Will send, postpaid, Opal, 25c; Moonstone, 25c; Garnet, \$1.50; Aquamarine, \$3. All choice, finely cut, and ready for setting. EDWIN C. ATKINSON, 116 North 19th St., Philadelphia.

WANTED.—Relics of the Mound-builders, Aztecs, or other pre-historic American races. Scientific publications, minerals or cash given. FRANKLIN C. JOHNSON, Boonville, Oneida Co., N. Y.

"My adv. in the Want Column has given me much pleasure. Have obtained all but the January number. Hardly expected to find the numbers I did find. Your Want Column is worth twice and three times what the contributors pay for it. Paul VanderEike, St. Croix Falls, Wis.

FOR SALE at a bargain.—Four good collections as follows: One of Shells valued at \$25. One of minerals, \$15. One of fossils, \$8. One of Indian relics, \$25. Will sell at about half price. Parties meaning business are requested to send stamp and mention which list you want. GEO. W. DIXON, Watertown, S. D.

STAMPS.—Better quality, greater variety. Packets, 25 varieties 10c; 10 varieties 20c; 200 assorted 15c; No. 10 used and unused 25 varieties 50c *very fine*; No. 50, 15 unused 25c; approval sheets, net prices discount rates. something new, try one. HOWARD M. GILLET, Lebanon Springs, N. Y.

TO EXCHANGE.—Fine set Columbian issue stamps to \$1 inclusive, for best offer of eggs in singles. WILLI M. BAKER, Vancouver, Wash., Care of J. W. PETRAN.

FOR SALE or Exchange.—Violin with case and magic lantern with about 50 views, will exchange for bicycle pneumatic tire, typewriter, printing press or offers. Address, JAS. E. REICH, Salem, N. C.

TO EXCHANGE. Good \$1 dark lantern and Stanleys History of Birds, gilt. for a good 22 or 32 cal. rifle. HENRY TOLMAN, Washington St., Newton, Mass.

WANTED.—Address of every Ornithologist in Iowa, in order to see if there are enough interested in the study in our state, to form an Association. DAVID L. SAVAGE, Salem, Henry Co., Iowa.

NOTICE.—Will exchange Frank Wesson 22 cal. rifle, skeleton stock, 18 inch barrel for either Coues' Key, Ridgway's Manual of North American Birds or Nuttall's Ornithology in latest edition. H. B. JOHNSON, Box 693 Orange, Mass.

BIRDS EGGS, Geodes, Minerals, Fossils, Picture Cards, Books of Histories, Adventurers, Novels, etc., for any kinds of Columbian, 1890 3 cts and higher, old U. S. Confederate and choice foreign stamps, curiosities, autographs and photographs of Great Men. ROBERT L. STEPHENS, Danville, Ills.

INDIAN RELICS from Chenango Co., N. Y. A lot of these to exchange for rare U. S. postage stamps. Will take old collections on examination. F. N. SILL, 199 Hamilton St., Albany, N. Y.

IDAHO Cabinet Specimens.—Minerals, fossilized and native wood, Indian relics, curios deer antlers and many other articles that make nice cabinet specimens, for sale very cheap or will ex. for merchandise, state what you have. W. F. STONE, Junction, Lemhi Co., Idaho.

THE following in exchange for bird skins or sets with data: Magic Lantern and 24 slides, throws 8 ft. view, 4x5 and 8x10 Waterbury lenses; German Imperial accordion and case and new landing net. P. K. GILMAN, 170 9th St., Oakland, Calif.

MINERALS.—Will exchange Free Gold and Silver Iron pyrites, Copper, Nickle, Galena crystals, amethyst, calcite, spar, apatite and many others for any other mineral. Good showy specimens. S. G. FOGG, Box 55, Rat Portage, Ontario.

WANTED.—Tarantulas in alcohol and common western eggs in sets for OÖLOGISTS of 1890, 1891, 1892, 1893 in good condition. WALTER C. METZ, 20 N. First St., Newark, Ohio.

WANTED.—22 cal. collecting gun for use with shot cartridges. New or 2nd hand, good condition. Easily taken apart. Give price. R. P. CURRIE, Care Executive Committee on Awards, Pacific Building, Washington, D. C.

A FINE Collection of showy minerals, also Indian arrow heads and curiosities to exchange for good stamps or a camera. The above valued at \$40 to be sold cheap or for exchange. A. R., 15 Pearl St., St. Johnsbury, Vt.

I HAVE a fine collection of eggs 175 varieties, mostly Fla. Eggs, which I will sell at one-third catalogue rates, also have eggs to exchange. All letters answered. BRYAN M. GRANT, Tallahassee, Fla.

It gives me great pleasure to be able to say that the OÖLOGIST as an advertising medium, in its special branch, is absolutely unrivalled. Having received answers from all parts of the U. S., Canada and Mexico, adding many desirable specimens to my collections. S. Van Rensselaer, Jr., 29 Broadway, N. Y. City.

FOR SALE or Exchange.—18 No's Auk. 6 vols of O. and O. 3 vols of Outing. 2 vols. of Gt. Divide, 55 No's of OÖLOGIST and 140 other books and papers on O. and O. Also 22 cal. Smith & Wesson and 44 cal. double action Frontier revolver and Skulls of Fox, Skunk, Raccoon and Cat. H. C. CAMPBELL, Lansingburgh, Rens. Co., N. Y.

Enclosed is 1.00 and copy of another exchange notice for May OÖLOGIST. There's a good old saying that "the proof of the pudding is in the eating," and you can judge for yourself, by the number of exchange notices I send for your paper, as to what returns I get from them. Geo. W. Dixon, Watertown, S. D.

TIN QUARTZ.—"Fine Cabinet Specimens" by mail 25c. Also Bad Land specimens cheap. JOHN CASHNER, City Treasurer, Spearfish, So. Dak. Always mention the OÖLOGIST.

TO EXCHANGE.—Fine Southern California sets and skins with full data, for first-class skins from the Eastern States. JOE GRINNELL, Pasadena, Cal.

PHILATELISTS.—I have about 5000 stamps to exchange for specimens in any department of Natural Science. J. A. CORCORAN, 155 Cowan Ave., Toronto, Ont.

I consider the OÖLOGIST unsurpassed by any Naturalist's Magazine as an advertising medium. From one notice inserted in its columns I received over 175 replies. C. M. Hatfield, Los Angeles, Calif.

100 Foreign Stamps, all different, for every 20 different U. S. stamps sent me. Manton's Taxidermy for best offer Columbian stamps. F. A. GREGORY, 1234 N. Court St., Rockford, Ill.

FOR SALE.—Beautiful ore specimens from the mines for 35 cts., large ones 50 cts. Postpaid. Reductions on large orders. Write quick. Address, MRS. T. P. CHASE, Lock Box 146, Socorro, New Mexico.

TO EXCHANGE.—I have a \$25 Stainer violin in good condition, for best offer in eggs or oölogical instruments, or for a clarinet. Also Bb cornet, value \$35 for best offer. All letters answered. GUY E. GLENN, Glencoe, Neb.

FOR SALE. - A good magic lantern with 11 slides for \$3, or will exchange. HENRY TOLMAN, JR., Washington St., Newton, Mass.

TO EXCHANGE.—Bb Cornet, Century Magazine, Columbian Stamps, sets and singles for sets, live birds and works on Ornithology and Oology. ROBERT TOMLINSON, Alden, Iowa.

FOR EXCHANGE.—Flobert Rifle, 22 cal., Remington action, walnut checked, Pistol Grip stock, weight 6½ lbs., Accurate Shooter, Nearly New, Cost \$5. Will exchange for U. S. coins. Make offers. A. B. ROBERTS, Weymouth, Medina Co., Ohio.

TO EXCHANGE.—Bb Cornet, Century Magazine, Columbian Stamps, sets and singles; for sets, live birds and works on Ornithology and Oology. ROBERT TOMLINSON, Alden, Iowa.

TO EXCHANGE.—A pair of three spike deer horns unmounted, for Davie's "Nests and Eggs" in perfect condition. J. R. KELLER, 112 W. Main St., Batavia, N. Y.

"I have had quite a shower of ans. to the March number. More than any other Mag. or Journal." John Cashner, City Treas., Spearfish, So. Dak.

CAMERA and single barrel shot gun cheap. Coins, books, fountain pen and magic lantern will exchange for botanical literature or specimens. Pressed plants exchanged. H. P. CHANDLER, Beaver Dam, Wis.

FOR SALE or Trade.—One Edwin Ladmore double barrel shot gun, No. 12 gauge, perfect order, cost nearly \$200, sell cheap or trade. One ¾ size 4 string double bass, cost \$43. \$25 will take it. I want Bb Cornet (silver). JULIUS GILBERT, Parker, So. Dak.

FOR SALE.—No. 1 Kodak, cost \$25 in perfect condition with sole-leather carrying case, \$10, castings and fittings complete for 1-10 H. P. electric motor, \$3 Remington 22 cal. rifle, \$3. Five drawer egg cabinet, \$2. Live chameleons, expressage prepaid, two dozen for \$1. A. B. BLAKEMORE, 280 St. Andrew St., New Orleans, La.

I WILL give \$10 worth of 1st class birds eggs for a copy of Coues' Key in A 1 condition. W. H. DEADERICK, Clarksville, Tenn.

WANTED.—Live birds and animals, will pay cash or give in exchange stamps or Indian Relics. BLENN R. BALES, Circleville, Ohio.

I WILL Pay cash for a few sets of desirable eggs if very cheap. Those having eggs for sale send list. Some common eggs also wanted. CHAS. L. BARTLETT, Clayton, Ills.

Have received one hundred answers from my exchange notice already. Your paper is a fine advertising medium. Guy Conley, Austin, Tex.

FOR EXCHANGE.—Smith & Wesson, safety hammerless revolver (new); Fine Violin outfit; many Scientific Books. Wanted. Rifle and Colt's frontier double action revolver. MARCUS S. FARR, University of Chicago, Chicago, Illinois.

WANTED.—To correspond with collectors who can furnish live Canada Grouse or Passenger Pigeons during the coming spring and summer. Parties who can furnish the same address B. BUCKENHAM, Chestnut Hill, Phila., Pa.

I SEND postpaid twelve 5c specimens, fossils, minerals, curios from all parts U. S. with full description of each for 25c. GORDON L. ELLIOTT, Allison, Ia.

INDIAN RELICS and old almanacs in exchange for eggs in sets or singles also eggs from other localities in exchange for eggs from this locality. GEO. A. SMITH, Oakfield, Genesee Co., N. Y.

I have received over one hundred replies to my adv. in March No. of the OÖLOGIST. It is worth 10 times its cost to any one. WILL D. LORD, Burlington, Mich.

IOWA Ornithologists who are interested in forming an Iowa Association of Ornithologists please communicate with DAVID L. SAVAGE, Salem, Iowa or ERNEST IRONS, Council Bluffs, Ia.

WANTED.—Specimens of Wood, Orange, Lemon, Camphor, Sandal, Olive, Rose, Citron or any native southern or foreign wood. Will exchange Indian relics for above. CHARLIE P. HAZLEHURST, Brantford, Ont.

WESTERN Bird Skins.—Choice Minn., Colo. and Pacific coast species. Also 4x5 detective camera, will exchange for photographic supplies. 32 S. & W. double action or hammerless with reloading set, or good 12 ga. shot gun that are in fine condition only, no worn out guns wanted at any price. Views on Natural History subjects for same. GEO. G. CANTWELL, Puyallup, Wash.

THE TARANTULA or trap door spider's nest is perhaps the most curious as well as the most wonderful piece of insect work known. The nest is closed with a water tight trap door having an elastic hinge. The inside of the door, as well as the tube itself is beautifully lined with a silken web. It is a valuable curiosity, and a great addition to any cabinet, and will be sent postpaid to any address on receipt of only 25c. Agents wanted. Address, C. M. HATFIELD, Los Angeles, Calif.

FOR SALE or Exchange.—Birds Eggs from here. Very fine specimens of pure White Quartz @ 5-10-25 and 50 cts., a few colored specimens at same prices. One very large handsome pink and white striped Feldspar or Quartz stone \$2.50. Want other fine showy Minerals. Petrified Woods and good Indian Relics. Also one new copy each of Cones' Key of N. A. Birds and Maynard's Eggs of N. A. Birds. Parties asking questions please send stamp for reply. GEO. W. DIXON, Watertown, S. D.

U. S. STAMPS wanted in ex. for following: Davie's Nest and Eggs of N. Am. Birds, cloth bound, new; Scott's complete works, 12 vol., paper bound; one doz. Monroe Ink Erasers. HENRY A. LAFLER, Albion, N. Y.

A SERIES of Cala. Murre Eggs is what you want. They show wonderful variation in color and marking and catch the eye. We can furnish beautiful series of from 1 to 100 at astonishing low rates. Send stamp for our attractive circular. Just out. It tells all about them. BARLOW & OSGOOD, San Jose, Calif.

TO EXCHANGE.—Am. Side-snap single gun, 12 ga., good condition for best offer in first-class Bird, mammal skins and skulls and Books on Ornithology and Mammalogy. Will pay cash for Jordan's Manual '92 and Zoology of Mexican Boundary Survey. J. O. DUNN, 360 39th St., Chicago.

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WE WILL give specimens of any kind, advertising space in the Oölogist, and for extra good offers anything we offer for sale or possibly CASH for first-class Indian Relics, or for new or 2d hand books on Natural History, in good condition, ornithology or oology preferred—a set of the "Natural History of New York" and copies of "Cones' Key" especially desired. F. H. LATTIN & CO Albion, N. Y.

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WANTED.—Small holed, authentic sets not disfigured with dates or large numbers; with detached data; 1894 collecting preferred, A. O. U. No's 27, 31, 49, 51a, 53, 54, 58, 59, 63, 70, 71, 72, 74, 75, 80, 106, 117, 118, 119, 120, 120a, 120b, 120c, 122, 132, 133, 136, 139, 140, 141, 146, 148, 151, 159, 160, 164, 167, 184, 186, 193, 194, 195, 196, 197, 198, 199, 203, 210, 211, 211a, 213, 218, 220, 229, 243, 252, 258, 258a, 260, 273, 275, 276, 278, 285, 286, 289, 289a, 290b, 294, 294a, 295, 300, 305, 332, 336, 358, 1, 387a, 390, 407, 408, 409, 413, 413a, 420a, 421, 423, 443, 448, 462, 464, 474c, 474d, 474f, 476, 481, 488a, 489, 490, 494, 508, 511, 511a, 517, 529, 529a, 530a, 531, 540a, 540b, 542a, 542b, 546, 546a, 552, 563a, 567, 573, 581d, 587, 601, 612, 616, 687, 694, 698, 703, 704, 710, 719a, 721b, 725, 730, 735, 743, 746, 758, 759b, 760, 761a, 765, 767, 768. Must be A 1 and reasonable. H. B. HOLLS, Wellesley Hills, Mass.

WHAT am I offered for a folding canvas canoe, which is as good as new manufacturers price thirty-five dollars. G. H. SHERIDAN, Highland Ave., Chestnut Hill, Phila., Pa.

FOR EXCHANGE.—Hummingbird's eggs in sets with nest or California Bush Tit's eggs in sets with data. GEO. S. GREENE, 1447 Temple St., Los Angeles, Cal.

PRINTING PRESS for sale. Excelsior Self inker, 5x8, 5 fonts of types, rules, furniture, ink, etc., only \$12. A. M. EDDY, Albion, N. Y.

FOR EXCHANGE.—I have about \$15 worth of bird eggs that I will trade for old coins of U. S., also for sale a Waterbury 5x8 camera for \$10. Write for particulars. T. M. WRIGHT, JR., Troy, Ohio.

TO EXCHANGE.—800 foreign stamps, 700 U. S. postmarks. *Polyphenus* and *Cecropia* cocoons for fine Rugby foot ball or U. S. stamps. 26 in. ball bearing convertible safety in fair condition for \$8 cash, cost \$45. R. V. N. DAVIS, Park St., Rutland, Vt.

A (\$75) Franklin Typewriter and (\$16) Edison Mimeograph nearly new to exchange for good safety bicycle or offers for sale at a bargain. R., 15 Pearl St., St. Johnsbury, Vt.

FOR SALE.—Grooved axes, Celts, Pestles game-balls, chisels, discoidal, pipes, banner, ceremonial and an endless variety of chipped implements, flint and jasper. DR. D. B. FREEMAN, 4000 Draxel Boulevard, Chicago, Ills.

FOR EXCHANGE.—Stamp papers, cigarette pictures and tobacco tags for a cyclometer or eggs in sets with data. W. M. BILLINGS, 727 University Ave., S. E. Minneapolis, Minn.

Do not publish my exchange adv. in the May No. of the OÖLOGIST as my duplicate fossils are all gone. I could have exchanged a car load if I had them. H. Myers, Archbald, Pa.

Mr. M. had paid for his notice to appear in both Apr. and May OÖLOGISTS.—Ed.

EGGS in Sets to Exchange for same. Send lists. Also a set of type, suitable for Hand Printing Press to exchange for eggs. J. H. CLARK, 238 Broadway, Paterson, N. J.

FOR EXCHANGE.—The following sets of 751 2-5 1-4 with data. "Nests at the price of one egg. International Scientists' Directory for 1892 for other books on Natural History. W. S. CRUZAN, Sulphur Springs, Texas.

TO EXCHANGE.—A first-class pair of nickel plated, ball bearing roller skates in first class condition, cost \$7.50 for a pair of 1st class climbing irons. A. I. MCCORMICK, 503 S. Olive St., Los Angeles, Calif.

I WOULD like to exchange sets or singles with collectors in other states or countries. Send for my list of eggs and send yours. JAS. R. BUNYAN JR., Kendallville, Ind.

WANT to exchange eggs of this locality for those of other localities. L. M. COX, Canfield, Mahoning Co., O.

PETRIFIED Moss, Fine specimens, postpaid, 10, 15 and 25c. Silver or stamps accepted. ARTHUR B. ROBERTS, Weymouth, Medina Co., Ohio.

SAVE your letters from going to the dead letter office by getting neatly printed Envelopes, 100 Envelopes, 40c; 100 Letter Heads 40c; 100 Cards, 40c; all for only \$1 postpaid. Send for samples. A. M. EDDY, Albion, N. Y.

FOR SALE.—First class sets and singles, with full data, of Nos. 191, 2 8, 5/3 at one half catalogue price. Live Chameleons, express-age prepaid, two dozen for \$1. H. B. BLAKE-MORE, 280 St. Andrew St., New Orleans, La.

FOR SALE.—An outfit consisting of Davie's Nests and Eggs, climbers, blowpipes, drills, scissors, tweezers, glass eyes, etc., value \$10.50 for best cash offer. D. B. MECORNEY, 164 Mulberry St., Lockport, N. Y.

MUST GO.—Complete job printing office, cost \$200, for sale cheap or will ex. for good horse or high grade bicycle. A chance for some one to start a Nat. History paper. H. STANTON SAWYER, Garland, Maine.

TO EXCHANGE.—Eggs, stamps, firearms, magazines, Wilson's Am. Ornithology and other books for eggs, skins and mounted birds, or offers. Sets and singles of eggs of birds indigenous to this state for others, full data. Correspondence invited, all letters answered. S. VAN RENSSLAER, JR., 29 Broadway, N. Y. City.

"Enclosed please find Money Order for \$1.80 for which please insert the enclosed advertisement in the OÖLOGIST for three months beginning with April number. Ad. in this month's issue has proved the value of your paper as an advertising medium, and we cannot recommend it to highly to advertisers." Meeker-Towe Stamp Co., Bridgeport, Conn.

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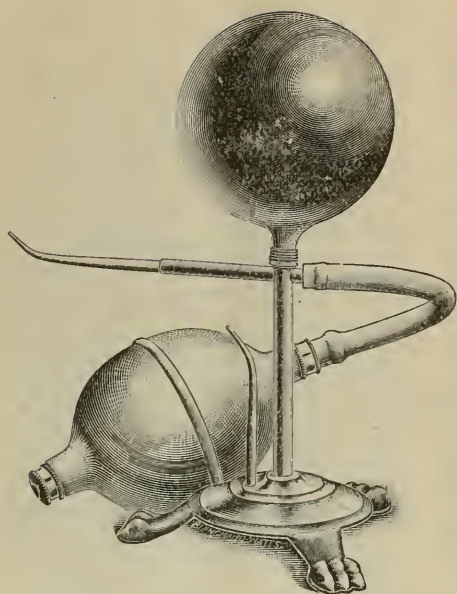
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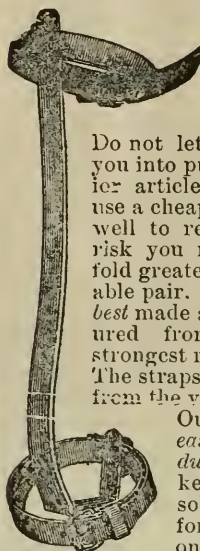
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ALBION, N. Y.

THE OÖLOGIST.

VOL. XI. NO. 5.

ALBION, N. Y., MAY, 1894.

WHOLE No. 103

My Broadwings of '92 and '93

"*Tig-g-c-e-e tig-g-e-e-e*" was the shrill Hawk shriek, that stirred my blood, one of the first warm days of April, in 1892, as I entered a dense belt of timber skirting a noisy swollen creek. The bird swept by me, close at hand, the characteristic markings appearing so plainly that though the bird was a stranger to me, I readily identified it by subsequent mental comparisons of this and other birds with the dried skin of a specimen killed by me in '84 but never identified, my work having lain meanwhile in other fields.

The previous March I had noted, in a a burr-oak wood amid neighboring fields, a nest which, in its construction and its location, told me that here was the work of some other bird than our common Cooper's Hawk.

May 15th I visited this wood. The old nest was vacant but forty rods away in another burr oak I luckily saw, close to the trunk, two-thirds up, and fifteen feet from the ground, the bare skeleton of a coarse stick nest, with suspicious flocks of down clinging to the rough bark. A moment found me looking into its vacant slovenliness,—adorned with naught but a delicate spray of poplar in fresh budding leaf. I turned, disgusted, to descend, when that keen, characteristic and unique "*Tig-g-e-e-e*" rang out again. May 21st I reascended the tree. Mamma *Latissimus* sat near by shrilly scolding. Two exquisite eggs now lay in the rude nest now gaily adorned with leafy tinge.

This is set 1. Two eggs, incubation one-fifth. Egg 1 rounded, covered entirely with lilac spots, the smaller end daubed with dark cinnamon, size 1.8x1.5. Egg 2, oblong, solidly and exquisitely marbled with lavender, heav-

iest at large end where also a few sharply accented cinnamon spots appeared, size 1.9x1.45.

Set. II. Leaving, one mile south of Owatonna, the miry highway leading to Bohemia, one dives into the moss bewitching woodlands. The wood road winds river-ward through mazes of black oak and across bits of meadow and on through a quagmire bordering a creek along which stands primeval ashes, oaks and walnuts outposts of a dense wood along the run. The narrow road being the only sign of human vandalism. Here, in the Spring of '92, the note of a Broad-wing stopped me as I was hastening river-ward along the wood path, and instantly the bird swept past, with wonderful swiftness, bearing a twig in her claws. Later in the day, at the margin of a field near by I saw a pair of the birds copulating, the male swooping down upon his mate as she rested, lightly in a sapling top. Yes, I vainly though repeatedly sought the nest—finding two old nests of Cooper's, a frequented lair of *Scops*, but not a sign of my Broad-wings.

But on May 20, '93, after a very busy day, I hurried my horse and carriage down the wood road, just as sun set: and behold, at the very edge of the wood, in a slender elm, that leaned over the creek bed, in the first limb crotch, 30 feet up, from a fragile nest, I saw, half by accident, the tail of a Hawk projecting.

It was the nest of '92 relined with twigs and remarkably neat. The eggs are the most delicate in coloring that I have ever taken. Incubation zero to begun. Egg 1, pointed sub-spherical, slightly stippled with bright cinnamon, and at the smaller end a marbling of the same, size 1.76x1.42. Egg 2, ovate, blotched with lilac mostly at the small

and, cinnamon spots on sides, size 1.76x 1.42. Egg 3, ovate, scattered lilac blotches, a few specks of cinnamon, size 1.76x1.43.

Set. III. In March of '93 I saw a Broad-wing watching me, sitting tamely and silently in a black oak thicket, north of town, while I wallowed through snow drift and grass tangle after a pair of Mallards that were fishing in a woodland marsh. On May 16th while scouring this spot for Bittern eggs, I saw the Broad-wing standing in the stout, three limbed body crotch of a black oak only ten feet up. A most rudimentary nest supported a single dark egg, which, with its later laid lighter colored mate, was taken, May 21, from the then completed nest of sticks, bark and leafy twigs.

Incubation begun. Egg 1, rounded oval, scattered cinnamon spots, a solid striation of same at small end, a few spots of darker, size 1.8x1.5. Egg 2, rounded oval, uniformly spotty blotched with lilac, small cinnamon spots well scattered, size 1.83x1.5. The '92 nest was in the densest part of the wood, twenty rods away, twelve feet up in swamp oak.

Set IV. Was taken in Atkin county, close to a wood road, forty rods from the shore of a beautiful wooded lake, in a rock maple, twenty feet up and within call of a farm house, was the nest. Reported to me by a small boy. The nest was large, of twigs, lined with bark and pine needles. Two eggs. Incubation advanced, May 31, '93. Egg 1, slightly rounded ovate, small scattered sub-lilac spots, small blotches of dull cinnamon massed at small end, as if laid on with dried brush, size 1.9x 1.65. Egg 2, oval, uniformly clouded with vinaceous cinnamon, rather heavier at small end, size 1.8x1.5. The female was seen on the empty nest 24 hours after.

Set V. At sunset of the same day, May 31st amid the heavy rock maple

timber on the east side of the same Farm Island Lake, I was watching with every sense intent for nest-going Wood Ducks. Hollow after hollow was vainly sounded. As darkness began to fall, I saw a tell-tale tail projecting from a slight stick nest, well set against the two foot trunk of a leaning bass wood, forty feet up, where the first two slight limbs cropped out. Madam left the nest quickly, silently. "A *Cooperi*" said I. To save me, I could not safely raise my head high enough to look into the nest there was spur hold and branchlet hold, only. A flatness, however, of small sticks. Eggs appeared uncolored in the twilight. But lamp light told a different story. Of the three eggs, number 1, oval and sharply pointed, was covered with very faint, cloudy specks of viaceous cinnamon, the large end being capped with a circlet of the same, and a few darker specks, size 2.15x1.5. Number 2, pointed oval, was marked with a very few vague, livid spots, and three or four blotchy spots of half obliterated bright cinnamon, size 2x1.52. Egg 3, pointed oval was spotted with livid, like No. 2, but with a few scattered "fly specks" of light brown. The large end of the egg was capped with a circle of these same "fly specks," very numerous and well defined, size of egg 2.15x1.51. Incubation begun. These eggs were larger than the largest Broad-wing eggs noted in Davie; yet Broad-wings they certainly were. And I went at dawn next day to prove it. Rowing rapidly over the clear still water my boat speedily ground the sand just at day break, under shadow of the pines and birches. Within three minutes I was standing beneath my leaning tree, eying, with bated breath, the expressive tail of the Hawk that sat motionless upon her empty nest. But, in a moment *Tig-q-e-e* and away she darted. Instantly the shout of a delighted naturalist echoed out and far across the lake. And a

very hungry man was almost before he knew it back to "camp" whiffing the odor of the birch bark that blazed beneath his morning eggs and coffee, back with a heart so light that I verily believe he would have been to light for the earth to hold, had he known what finer finds awaited him that day! With what condescending complacency did he greet John, John the Fisher's son, who drew to shore, a moment later than himself, with the big brass kettle in his boat well filled with lordly bass and pike.

Set VI. But June 5th found me at home; and June 7th found me on the spur of a heavily wooded and ravine seamed hill, one-fourth of a mile from the river, just north of town. There, from a fairly large, bark lined nest, freshly made, in the very top of a white walnut sapling, 20 feet up. I had taken in the Spring of '92, an incomplete set of three pale-green eggs of Cooper's Hawk, heavily spotted with bright cinnamon; and near this nest I had seen and heard a Broad-wing, just before starting on my northern trip. And to-day June 7th she was on that nest; and, while "Mamma" aired her Botany and my small lineal descendant, creeping among the dry leaves was cramming his stomach with acorns and the corms of adder tongue. I lazily spurred up the sapling.

The set of two slightly incubated eggs I found is the only set I have ever handled in which one egg was not perceptibly darker than the others (and the only set which I have been foolish enough to part with). Egg 1, oval, was blotched with lilac, a single cinnamon blotch adorning the small end, size 1.95x1.5. Egg 2, oval, was beautifully marbled with lilac at both ends, size 1.88x1.45.

Set VII. This set brought me by a small boy, was taken in a dense black-oak wood almost within town limits, from a typical nest in a small black oak

tree. The two (much incubated) eggs of this set are very small, but very strikingly, otherwise, like certain eggs of the Kittiwake Gull. All other eggs were of a white or grey-white ground color, while these were of a greyish-drab. Egg 1, oval, was covered, all over, with large spots of dull cinnamon brown, size 1.83x1.43. Egg 2, rounded ovate, was blotched and spotted obscurely with vinaceous cinnamon, heaviest at large end where also a few spots of bright cinnamon, size 1.75x1.42.

Set VIII. This set and sets IX and X were taken by my friend Kinney, a farmer, and an enthusiastic "all-round" naturalist, near wooded lakes, about fifteen miles west of Owatonna. Set VIII, one egg, May 29, '92, Goose Lake, Waseca county, size 2x1.44, long oval, clouded with whorl disposed streaks and blotches of bright vinaceous cinnamon, the blotching being heaviest and the color brightest at the small end.

Set IX. One egg, incubation slight. Woodville, Minn., May 14, '93, pointed subspherical, white with a few spots and clouds of exceedingly faint vinaceous, chiefly at small end where, also, a few scattered spots of pale cinnamon, size 1.72x1.43.

Set X. Two eggs, fresh, Goose Lake, May 22, '93. Egg 1, nearly equal ended, heavily clouded at one end with dull lilac, size 1.75x1.43. Egg two, pointed oval, scattered specks of cinnamon and a few lilac spots, at the small end a few large spots of cinnamon and small scratchy spots of lilac, size 1.75x1.14.

In closing, a synopsis may not give offense.

Of the above listed sets, two were of three eggs, six of two and two of one, (both perhaps incomplete). There are three color-types: cinnamon-spotted; lilac-blotched; white—with obscure speck or cloud markings. Of the twenty eggs, five are of the cinnamon type; eight of the lilac; five of the white, and two neutral (abnormal). Where heavy

marks occur they are all at the small end.

There are three form-types, pear-shaped; oval; subspherical. The majority have the rounded form.

The largest egg measures 2.15x1.51; the smallest 1.72x1.43; average 1.83x1.5. Most of the sets were complete, probably about May 20. Earliest date May 14th, latest, June 7th (incubation well begun).

The nests were mainly rather rude, of medium fine sticks. Most were bark lined and leafy-twigs adorned. Adventitious down was usually found. The nesting situs was, mainly, snug to the trunk, seldom higher than the middle boughs, normally flattish and laid on semi-horizontal branches, mostly on comparatively small trees in the denser woods and seldom more than twenty-five feet up. As to the sites being near water, in case of *our* birds, it couldn't well have been otherwise.

Most birds were bold, and noisy, near the nest. There seemed a tendency to cling to the empty cradle, when incubation had begun. Nests were seldom reoccupied, but localities were apparently revisited yearly. With us, the Broad-wings love to soar, by day, making the air ring with their cries. As to their food, by *dissection*, I cannot tell, —my geese lay golden eggs. By *observation*, I cannot tell. The everlasting number of the exactions of professional life sets a rigid bound to the love for field study that burns in the heart of the enthusiastic naturalist.

P. B. PEABODY,
Wilder, Minn.

Wilson's Snipe.

To a certain class of western sportsmen whose hunting grounds lie in the immediate vicinity of the cities, spring will bring no more welcome bird than that familiarly known as the Jack Snipe.

Considering that it is a wading bird it finds its way into Minnesota rather early: generally following the first few flights of ducks. Often a return of cold weather freezes the wet ground to which they commonly resort, yet they weather it out and manage to obtain subsistence. The last of April will find them most common just before the mass of them move northward.

Many accounts report them as breeding north of the State, I know not why, for this bird is certainly not an over rare nester in the vicinity of Minneapolis.

That twilight chant, characteristic of the breeding season is commonly heard over some of the meadows which I am accustomed to pass on my journeys in pursuit of birds. I have called it a chant for want of a better name. It is a continual whispering sound made while the bird is circling about far up over its selected home, and might readily impress one as being made by the wings. Nuttall aptly describes it when he likens it to the "sound produced by quickly and interruptedly blowing into the neck of a large bottle" and adds that "this note is probably produced by an undulatory motion of air in the throat while in the act of whirling flight and, appears most distinct, as the Snipe descends toward the ground." My other available accounts either say that it is made by the wings, or give no theories, whatever.

Dark, misty, or rainy days are sometimes favorable for this performance, and I have even heard it in the middle of a bright May afternoon, but it generally takes place early in the morning or late at evening when darkness shades the bird. Your attention cannot but be attracted to it should you pass his home at nightfall, for it alone breaks the silence after the notes of the songsters have died away.

About eight years ago I frightened a bird up from her nest at the edge of a

marsh; I think it was about the first week in May. The nest was in a slight hollow on one of those hummocks of earth so common at the borders of meadows and marshes, and was lined with a few grasses, and well concealed by arching grasses. A week later a second nest was found about a hundred yards from the first and exactly resembling it in situation and composition. It contained four eggs as did the preceding. Three years later I ran across another nest which was placed on a rise of ground in a meadow, like the others it was well arched over and contained a lining of grasses. This nest contained one egg which was left in the hopes of obtaining a set. After visiting it twice more I was obliged to be content with three eggs, for the nest had been deserted.

During the heat of the summer we see very little of the bird in question, for he is busied with the rearing of his young and keeps well hidden in the grass, but as soon as September comes he puts in his appearance.

Very early last fall while traversing a lake in a boat, I caught sight of a flock of waders rising from the floating slime that had gathered at the borders. They kept very close together, and at every turn the white of the under part of the wings shone so that I was reminded of a flock of scurrying Snow Buntings. At nearer approach I found that they were a flock of the Wilson's Snipe, which now and then rose and circled apparently from no cause.

They remained about this lake several days, and were augmented by other flocks, despite the shooting that went on when several birds were often killed at a shot. I have never seen them floating together like this except upon this occasion, though later in the year they are found in small groups somewhat scattered in the meadows.

Despite the wealth of larger game in this state the gunner finds the Snipe an attractive object, and the best mark

possible on which to test his skill, and if he treads the meadows hereabout during latter September or in October he is not likely to go unawarded.

As they rise ahead of one they sometimes utter a harsh grating cry and sinuate so much for the first few yards of their flight that it is hard to hit them, though this is not always the case and their flight may be even and straight.

The rule has been laid down that they always fly against the wind which in my experience is not the case.

I have had the best luck hunting them in dry seasons where the retreating water of the lakes had left a portion of the muddy bottom bare, thus forming an excellent feeding ground where they might probe for the worms, insects and small roots which constitute their food.

This bird was known as the English Snipe before Wilson pointed out the difference between our bird and the true English Snipe. In Nuttall's time it was called the Alewife bird near the Massachusetts coast—its arrival being associated with the arrival of the shoals of fish of that name.

Others say that it was called the Shad Spirit along some parts of the New England coast, as that peculiar twilight sound proceeded from an unknown source and was said to accompany the northward movement of the Shad. At the markets here it is only known as the Jack Snipe or simply Snipe though most any wader may be called a Snipe out of want of another name. I have seen a Sand-hill Crane hanging up for sale bearing a card marked "Irish Snipe."

The State Zoölogist's Report quotes someone as being confident that this bird winters in South-western Minnesota. In the region about Minneapolis an occasional bird may be found lingering about some open spring very late in the year, but early November sees the majority depart for a warmer climate.

H. M. GUILFORD,
Minneapolis, Minn.

SCENES FROM THE LIFE OF ALEXANDER WILSON.

His Last Days.

G. VROOMAN SMITH.

XI.

Returning from his southwestern trip on the 2d of August, 1810, Wilson immediately applied himself with unremitting attention to the preparation of the third volume of the Ornithology. The number of new and undiscovered birds which he had found on this trip amounted to forty. Enriched with this choice stock of new material for his work he labored unceasingly to get the plates and text prepared for publication. His whole energy was exerted in unwearied industry to the finishing of the magnificent work he had undertaken. The remaining volumes appeared in rapid succession considering that he had to do the whole work himself.

Wilson spent the greater part of the years 1811 and 1812 in the genial company of his old friend Mr. Bartram, under whose hospitable roof he resided. This retreat proved to be of inestimable value to him. Here, removed from the bustle and interruption of the city, he was enabled to dispose of his time to the best advantage. In the shady retreats of the botanic garden there dwelt multitudes of feathered creatures whose society was carefully fostered by the proprietor. When Wilson became wearied by long hours of study he had only to step outside and refresh his mind by the observation and enjoyment of these feathered friends. His long sojourn at the botanic garden did much to improve his health which had been considerably impaired by over exertion. He made frequent excursions to many places in the vicinity to obtain additional information for the perfecting of his work. Several

visits were made to the shores of New Jersey where much valuable material was gathered of the shore birds which inhabited that region in vast numbers.

Meanwhile his ability as a natural artist had become so well known that he was chosen a member of the society of Artists of the United States. The following year he was honored by being admitted to the American Philosophical Society of Philadelphia.

The last of those journeys which did so much for the cause of science in this country was to the eastward. He says this trip principally undertaken for the purpose of visiting his agents and subscribers, yet at every point his pen was busy and upon his return he found his note book to be by no means empty. Unfortunately we have no very minute account of this tour preserved.

From New York he proceeded up the Hudson River by boat as far as Albany. From Albany he journeyed overland to Lake Champlain, and up that waterway to Burlington, Vt. Thence across the state of Vermont to the headwaters of the Connecticut River, remaining some time exploring the neighborhood of the White Mountains. The magnificent scenery of this region was contemplated with the greatest delight by Wilson. On the heights of Mount Washington he found a pair of Snow Buntings breeding. This find was regarded by him as one of the most valuable and interesting of his ornithological experience as it was the only known instance of this species breeding within the limits of the United States.

This tour was undertaken just at the commencement of the war of 1812, and the whole country was plunged into feverish excitement. Everywhere Wilson went he saw evidences of it, and more especially in the north of New England, the frontier region between Canada and the United States.

He relates an interesting adventure

in which he figured prominently, and which goes to show how intensely suspicious the inhabitants were of strangers. He was at Hanover, N. H. where he was considerably engaged in exploring the region round about. The suspicion of the inhabitants was aroused and they consulted together to determine his business in those parts. After due deliberation they came to the conclusion that he was none else than a spy from Canada who was exploring the country with a view to determine the best course by which a military force could be sent from the British provinces into New England. Our innocent traveller was arrested and taken before a magistrate with all the form due to the capture of an obnoxious individual. He was questioned as to the nature of his business there, and when he informed them that he was no more than a spy in the sense of determining the course of the migration of innocent birds he was promptly dismissed with many apologies.

The seventh volume appeared in the spring of 1813. and as soon as it left the press he, accompanied by his friend, Mr. Ord of Philadelphia, went to Great Egg Harbor, where they remained nearly four weeks constantly occupied in collecting material for the eighth volume, which he resolved should, if possible, excel the others both in the value of its material and the beauty of its embellishments. This sojourn at the coast was very profitable to Wilson and while there he became the recipient of much desired information. Upon his return to Philadelphia he plunged into the work of the remaining volumes. Day and night were spent in order that he might complete the work as soon as possible for he felt that his long fatiguing journeys were wearing upon his vitality. He was obliged to rely wholly upon his own labor, as those who attempted to assist him were either incompetent or annoy-

ingly slow. In August, 1813, the eighth volume was ready for the press.

His mind and body had become debilitated by over exertion and its consequences early brought on his death. The immediate cause of his death was in striking contrast to the romantic life he had led. It seems that while one day conversing with a friend he saw flit by a rare bird, which he had for years been desirous of obtaining. He hastened in pursuit of the bird and in his eagerness to obtain it he indiscreetly swam across a river, and while he captured the object of his pursuit, yet the prize proved to be the cause of his untimely death, for the exposure produced a severe cold followed by an attack of the dysentery, the same troublesome disease of his southern journey. Ten days later, August 23, 1813, the great pioneer ornithologist of America ended his mortal career having just a few weeks previous completed his forty-seventh year. His brother was informed of his dangerous illness, and reached his bedside a few hours before his death. He says: "I found him speechless; I caught his hand; he seemed to know me, and that was all."

Wilson frequently conversed with a friend on the subject of death, and it was his earnest wish that he might be buried where "the birds might sing over his grave." What a fitting wish for one who had spent a lifetime in their company! It is to be deplored that this wish was not known to those who were with him in his last moments and his remains were laid to rest in the cemetery of the Swedish church in Southwick, Philadelphia. Erected over his grave is an unpretentious marble monument bearing the following inscription:

THIS MONUMENT
COVERS THE REMAINS OF
ALEXANDER WILSON,
AUTHOR OF THE
AMERICAN ORNITHOLOGY.

HE WAS BORN IN RENFREWSHIRE, SCOTLAND,
ON THE 6TH DAY OF JULY, 1766
EMIGRATED TO THE UNITED STATES
IN THE YEAR 1794,
AND DIED IN PHILADELPHIA,
OF THE DYSENTERY
ON THE 23D OF AUGUST, 1813.
AGED 47.

It is becoming that we append some remarks descriptive of the character of this extraordinary personage. In the preface of the ninth volume of the *Ornithology* is a brief sketch of Wilson by his close friend Mr. Ord. We know of no more fitting description of his personal character than that drawn by Mr. Ord, and therefore I take pleasure in submitting to the indulgent reader this gentleman's candid and discriminating account of Wilson's character.

"Wilson was possessed with the nicest sense of honor. In all his dealing he was not only scrupulously just but highly generous. His veneration for truth was exemplary. His disposition was social and affectionate. His benevolence was extensive. He was remarkably temperate in eating and drinking; his love of study and retirement preserving him from the contaminating influence of the convivial circle. But as no one is perfect, Wilson in a small degree partook of the weakness of humanity. He was of the genus irritable, and was obstinate in opinion. It ever gave him pleasure to acknowledge error, when the conviction resulted from his own judgment alone, but he could not endure to be told of his mistakes. Hence his associates had to be sparing of their criticisms, through a fear of forfeiting his friendship. With almost all his friends he had occasionally, arising from a collision of opinion, some slight

misunderstanding, which was soon passed over, leaving no disagreeable impression. But an act of disrespect he could ill brook, and a wilful injury he would seldom forgive.

"In his person he was of a middle stature, of a thin habit of body; his cheek-bones projected and his eyes though hollow displayed considerable vivacity and intelligence; his complexion was sallow, his mien thoughtful; his features were coarse, and there was a dash of vulgarity in his physiognomy, which struck the observer at the first view, but which failed to impress one on acquaintance. His walk was quick when travelling, so much so that it was difficult for a companion to keep pace with him; but when in the forests, in pursuit of birds, he was deliberate and attentive—he was, as it were, all eyes and all ears."

So lived and died a true friend of science. Those who are acquainted with the incidents of his remarkable life cannot but feel a glowing admiration for this truly exalted character. Of all our ornithologists none deserve to be remembered with more profound respect than does Alexander Wilson. The science of ornithology was almost unknown in this country till he made it memorable. He glorified it and made our native birds the envy and admiration of the world. He was the great sculptor who made America's feathered songsters as famous as the primeval forests in which they dwelt. His success was complete, and though he did not live to enjoy it, he certainly anticipated what has come to pass, that his work would always be regarded as a subject of pride by his adopted country and would secure immortal honor for him whose name it bears. It is fitting to add that he was eminently endowed by nature and by art, with the qualities of a great naturalist. He concentrated his undivided attention upon the great purpose of his life. He

entered upon it, not as many are wont to do at present, namely, as an amusement, but with a deep and determined spirit he made it the one great business of his life. At all times he made himself a social companion of his feathered friends, he studied them as he would a familiar friend. His life was spent in the study of their domestic habits instincts, nidification, migration and seemed in fact to pry into their very nature, and interpret their language and dispositions. Their voice to his trained ear was not music but language, and instead of dying away upon the ear, it went down into his very soul and moved him as the voice of a human friend. In his description of birds he speaks of them as if they were intelligent beings, and has thus given a life and charm to his descriptions which will make his work the chief attraction of ornithological science for years to come.

When we think of his sad end we cannot but deplore his untimely death; called away at the age of forty-seven, in the very prime of life. If he had lived he contemplated preparing a similar work on the quadrupeds of North America.

Of all characters in history none are more worthy of emulation for the young ornithologist than is this life of Wilson's. All vulgar or selfish considerations he was purified from by his devotion to science. He made his life conform to the requirements of a true naturalist. His study of ornithology was not as a mere pastime to amass a large store of specimens, but his great life's end was to cultivate a love for pure ornithology. We deplore very deeply that there are not more exemplifying his life today. Let us resolve to emulate him and by so doing raise our beloved science to a higher level and place it where our great predecessor left it.

THE END.

An Inexpensive Boat.

Every collecting oölogist and ornithologist is almost sure to have use for a boat at some time. As a suitable craft is not always at hand or for other reasons, sometimes pecuniary the collector frequently attempts the construction of something in the boat line.

As most of us "collecting cranks" are not blessed with great store of earthly treasures it is desirable to reduce the cost to a minimum.

While the boat constructed after the directions below is hardly stylish or very speedy it is serviceable, strong and safe and the cost is so little that a single season or even a few weeks use will repay the builder for all trouble and expense incurred. The material needed is as follows:

BILL OF MATERIAL.

4 Boards, 1 ft. wide, inch thick, 16 ft. long, (a 1½c per ft.....)	\$ 96
1 piece timber, 4x6 in., 1 ft. long..	05
5lbs. 10d nails (a 4c per lb.....)	20
10lbs pitch (a 1½c per lb.....)	16
Total.....	\$1 36

The boards may be rough hemlock or or pine, and should have no loose knots two of them should have no large knots or cracks.

The boat will have a better appearance if the boards are dressed but that is not essential.

For the sides of the bateau use the two clear boards, first cutting them down to twelve feet in length. Make a mark six inches from the end of one of them and saw it across diagonally, this is the bow end.

Mark nine inches down the diagonal cut and two feet six inches back from the lower end and connect these marks by a saw cut. This takes off a long wedge shaped piece and makes the upward curve of the bottom at the bow.

Mark nine inches down the stem end, which is square and two feet along the lower edge, sawing off another wedge

not quite as large as before. This curves the bottom up at the stern. Laying this board on the one selected for the other side it is an easy matter to mark and saw it.

Next saw or hew the four by six piece in the shape of a triangle, minus the apex. The base of the triangle should be five and one-half inches and the opposite side should have a width of two inches.

Lay this on one of the side boards at the bow, mark the slant of the bottom and saw the end of the bow post off.

Now the sides may be nailed securely to this post, being sure to get them even with the two inch face of it.

Another board should be ripped into two pieces one nine inches wide, the other three of course, and a piece two feet long cut from the nine inch piece. A stick or piece of board three feet long placed midway of the side boards will hold them the proper distance apart while bending them till able to nail them to the stern board just cut.

If the boards are wet they will bend easier and with less danger of breaking, though unless assisted by a second person the workman will be obliged to use a rope or strap to draw them together and hold them until they can be nailed. Another nine inch piece must be nailed across on top of stern and sides forming the stern seat and holding the sides firmly together. Boards may now be laid across the bottom, marked, sawed and nailed on, until the bow is reached.

Use about four nails in the end of each board and see that the pieces are close together, leaving no large cracks.

Two pieces of the nine inch board are saved to use as seats, the remainder may be used with the wider pieces in making the boat bottom.

One of these seats should be fitted about three feet from the stern and the other two feet ahead of the middle. The ends should rest on cleats nailed to the side boards and the seats firmly

nailed in place as they brace the boat and prevent the sides from springing.

A triangular strip should be fitted over the bow post, (one of the corners of that post, which was ripped off will do) and when fastened on extends down over the bottom board and covers the ends of the side pieces, forming a blunt cut-water. Every collector has of course a stock of hemp or oakum and the cracks between the bottom boards must be caulked with these, using a hard wood wedge or a dull chisel to drive it into the crevices firmly.

Cotton waste will also answer for caulking material.

If the center brace is removed, seats fitted, all cracks and nail holes plugged the pitch may be got ready for application.

This substance, such as is used on roofs, walls, etc., may be melted in some old iron pot until it can be applied with a swab.

It is well first to take an old tin can and in sailor parlance "pay" the seams with melted pitch, that is pour a thin stream of the stuff along the cracks where it will penetrate the oakum and harden, effectually excluding the water. With the swab smear both inside and out of the boat bottom and your 'bateu' is ready for the water.

Oar locks and oars may be used but the collector will find paddles preferable often as they enable him to face the bow.

As the craft draws but a few inches of water it may be used on marshes where a shoving pole will be most useful in propelling it.

The bateau constructed as above will easily carry three or four persons and with paint and better lumber is quite as good as any boat of similar character for pleasure riding, fishing, hunting or trapping.

The cost is so low that if only used for one vacation it can be turned adrift or given away with little loss.

The material can be procured almost anywhere, the pitch being most difficult to obtain, but it is kept by most dealers in building supplies and all ship chandlers.

The brief directions above are modified from similar material in *Camp Life and the Tricks of Trapping** by Wm. H. Gibson; a book which every field collector should possess.

To build a boat as above described is not merely theory, it has been practically demonstrated by the writer.

ALBERT B. FARNHAM,
Benning, Dist. Columbia.

* This book can be procured of the Publishers of the OÖLOGIST, and will be sent pre-paid upon receipt of \$1.00.

A Pair of *Bubos* at Home.

With the rapid clearing of the forests from the smaller water-courses of this section, the Great Horned Owl has ceased to be abundant and in this locality is met with only occasionally. I know of but one pair residing at present in this township. Their home is in a thirty-acre tract of timber bordering the shallow creek two miles west of my home town, and they are so harried by hunters and crows that life must be a burden to them. However, food is abundant, for the tract still harbors squirrels and small birds in numbers, and therefore I suppose *Bubo* is content to remain a landmark of happier days.

While tramping over this wooded tract last fall, I daily startled one or both of these Owls from their morning naps. They see well in daytime, and do not appear inconvenienced by the light, though their flight among the trees is low and uncertain. If they are pursued, a bare limb above the middle point of a large tree is usually selected for a new perch, and the lowest point of their flight is just before rising to alight in the tree. When quiet

reigns again, they seek a new retreat, either in a hollow tree or among the branches of a brushy one, the latter being their preference. As evening comes on, they leave their resting places and fly forth with strong flight in wide, irregular circles, shrinking from no enemy and fearlessly displaying their powerful rapacious natures.

For birds that are popularly supposed to doze during the day, these Owls are remarkably wakeful and wary. It was a difficult matter to surprise either of this surviving pair of *Bubos*, and rarely was I allowed to approach within shot gun range of them. The moment they were flushed, a noisy pack of Crows would be in hot pursuit, and when the Owls alighted, the Crows would perch on all sides of the object of their disgust some occasionally flying quite near and making a feint attack, to all which demonstrations the Owl was supremely indifferent. Any movement on the part of the Owl would evoke a perfect torrent of outcries and abuse from the Crows. Finally, having exhausted the corvine vocabulary of epithets and scurrility, and becoming tired of deriding that which, like Diogenes, would not be deided, one by one the Crows would leave the spot and seek less stoical victims or less noisy amusements. When I entered the woods, if I failed to startle him myself, I seldom failed to locate the particular quarters of *Bubo* by the noisy demonstrations of the Crows. I often wished that the Owl would for once so far forget his buhal dignity as to lose his temper and pounce upon one of his tormentors, that I might witness the hasty scrambling of the cowardly crowd to safe quarters. But *Bubo* is long suffering and sets us a noble example of patient endurance in persecution.

Along in January *Bubo* became musically inclined. As the sun sank behind the western knoll, at the close of

the short afternoon, and I tramped my weary way homeward in the gathering gloom, the big bass voice resounded out from the trees with "*who,—who, who,*" the space representing a rest in the usual notes, and though far away the heavy tones followed me on my way.

On Feb. 17th of this year, I missed the pair from the tract of woods, though I searched closely for them, as I was becoming anxious to inspect the domestic arrangements of Mrs. *Bubo*, and having been B. Hindtime once in my life at least, I had no desire to be as unfortunate in this case. On my way home, however, I passed through a twenty-acre tract of woods east of the first-mentioned and adjoining it, hearing the usual Crow racket, and I found my *Bubos*, which had apparently pre-empted and were at home in the new claim, though as yet there was no evidence of housekeeping. On the following Saturday, Feb. 24th, I found myself in the east timber again looking for *Bubo*. I had crossed a small ravine and was ascending the rising ground on the opposite side, when Mr. *Bubo* started from the brushy trees ahead of me. He flapped silently away, though not unobserved by several loitering Crows, and the usual racket began. What interested me, however, was an old nest in the top of a scrubby oak, about thirty feet from the ground, and I felt that set number one of the season was about to be recorded.

It was a cold day with six inches of snow caked on the ground, I saw that the tree was a scratchy one, and I had no climbers, but up I clambered. When about half way up I felt a catch in my left leg and it refused to come up properly. Moreover that nest didn't look just right, and I felt that it was too early for eggs anyway, but I kept scratching up and reached the nest. It was not empty, but filled to the brim with dried leaves. I descended

as rapidly as the brushy limbs and the catch in my leg would admit, with bleeding wrists and bruised shins. It was a colder day than I had thought.

I readjusted my wraps and went on through the woods. Soon I saw another old nest in a tree ahead of me, and on approaching it, I saw a pair of tufts protruding above the nest, and a familiar head peering over the edge of the ruin, then Mrs. *Bubo* slightly spread her wings over her treasures and crouched lower to await developments. A few blows on the trunk of the tree sent her flapping away into another portion of the woods. There was no mistake this time. Here was a smooth-barked hickory, with no limb nor prominence for twenty-five feet, with the nest set in a crotch eight feet higher. However, I forgot my bleeding wrists, my bruised shins, and the catch in my leg, threw off my coat, and began to reach and pull up the smooth trunk. My first efforts carried me up to within eight feet of the first limb. Then I stuck and with each new reach I failed to gain an inch. In fact, I lost several inches. I felt that I had reached a crisis. To slide down from that height was ignominy, while above me was that which alone could satisfy my longing nature. Mr. Editor, you have doubtless been right there. I made a final desperate reach, clung fast, pulled up, and soon landed on the limb below the nest. But why prolong a short story? I found two beautiful fresh eggs lying about four inches apart on the bare twigs of an old Hawk's nest and thus opened the season of '94.

The *Bubos*, disheartened by this disaster, returned to their forest quarters. In the early March evenings I could hear the pair discussing their affairs in resounding tones. About March 20th I failed to find Mrs. *Bubo* in company with her spouse and he had again ceased to display his magnificent voice.

Their new home was in a hollow about thirty feet high in a big cottonwood, and in this safe retreat two young *Bubos* will be trained to endure the abuse of Crows and to evade the prying eyes of collectors.

P. M. SILLOWAY,
Virden, Ill.

Collecting in a Minnesota Swamp.

About four miles north of St. Paul there is a large swamp, which is a favorite breeding ground for numerous species of water birds, especially Black Terns and Rails.

On the 9th of June last season a friend and myself started out for this place to put in a day's collecting. On arriving there no boats could be found, so we were forced to wade up to our waists with our clothes on, as the water was extremely cold.

The swamp is surrounded by a patch of rushes and cat-tails in which the Yellow-headed and Red-winged Blackbirds breed by the hundreds. The Yellow-heads are much more numerous than the Red-wings, and, as a rule, make their nests considerably higher up in the reeds.

We collected a series of twenty sets, which show great variations in shape, size and coloration. The nests of the Yellow-headed Blackbirds are placed from one to four feet above water and strongly woven to the surrounding reeds.

The nests are composed of strips of dead reeds and lined with dry grasses. Some of the nests were lined with thin shavings and excelsior, though where they got them I am at loss to know, as there are no buildings, that I know of, in the vicinity.

The eggs were usually four in number, rarely five, and occasionally three.

At this date the eggs were well incubated, the last week in May being the best time to procure fresh sets.

After collecting these we pushed on and soon came to a Sora Rail's nest containing a fresh set of ten. After a half an hour's searching we obtained six more sets of Sora's, three of ten, two of eleven and one of fifteen—an unusually large one.

We also obtained three sets of Virginia Rail's, all of eight eggs, which is the usual number here. The Rail's nests are simply a heap of decomposed weeds and other vegetable matter, on which a heap of small strips of dead reeds about two inches in length are placed, there is usually a hollow in the top of this about an inch or two deep in which the eggs are laid.

The nests are about three inches above water, and the eggs are sometimes covered with water, which does not seem to effect the birds at all, however, as the eggs are usually hatched out all right notwithstanding this.

In no case was the parent observed on the nest.

Passing on through the rushes we came to an open space, clear of reeds, thick with floating vegetable matter. Suddenly a large bird flew up to one side, in the edge of the reeds, hastening there we found a beautiful set of four eggs of the American Bittern. Upon blowing these proved fresh.

All at once a cloud of Black Terns arose from a patch of floating matter, enclosed by a circle of reeds. The Terns kept up a terrible fuss and we thought they must have young.

Upon wading over to that side we began to search for their nests. We soon found and collected a good series of sets, the Terns meanwhile keeping up a deafening racket, and darting down at us and knocking our hats off several times. At last their attack began to be unpleasant to say the least, and my friend at last took out his 22 cal. revolver and fired several shots into them, but this was of no avail and they kept it up worse than ever until when we

had collected all the sets we needed we were glad to beat a retreat and get rid of them. I have never found any birds so fierce at any one disturbing their eggs, except perhaps the Robin.

The nests of the Terns were flimsy affairs, simply half a dozen pieces of reeds laid around their three eggs to keep them from rolling off the Muskrat houses on which they were laid.

Upon blowing the eggs they were found to be far advanced in incubation, and they would have hatched in two or three days,

We then retraced our way through the reeds, taking a set of five Least Bittern, on the way.

WALTON MITCHELL,
St. Paul, Minn.

A Collecting Trip in North Dakota.

During the spring of '92 I was collecting specimens in the ornithological line in North Dakota.

I am deeply indebted to Mr. Judd of Cando for courtesies extended. Being an energetic and enthusiastic collector and the possessor of a fine pair of Bronchos, suffice to say he made an agreeable companion. Of the different interesting localities visited, I will confine my narrative to a trip to and from Devil's Lake which occupied three days about the middle of June. As one would naturally suppose we got an early start leaving Cando before sunrise. Our dog Fritz employed himself catching gophers for the first few miles. On our right we watch Ring-billed and Franklin's Gulls seeking a breakfast on a newly plowed strip of land. Of the different species of birds seen I have not space to make special mention of each. Conspicuous among them however were the Chestnut-collared Longspurs with their soaring and "a la parachute descent" as Dr. Coues fittingly calls it.

Black Tern and Yellow-headed Black-

birds were in sight most of the time. Baird's Sparrows were more often heard than seen, and each pond and slough had its usual quota of Ducks. As we neared the Big Coulee we saw a female Blue-winged Teal alight in a thick bunch of grass. Upon investigation a set of eight eggs was discovered. At Church's Ferry we made a short stop to make inquiries concerning routes, and were soon on our way towards Graham's Island as we supposed. I commenced to feel drowsy as the heat of the day came on. However I was soon awakened from my slumbers by a fluttering on my left. Fritz had flushed a "Pintail Chichen" from her nest. How I regreted that I was not the possessor of a kodak.

The dog came to a point and the Grouse stood on the defense with head lowered and wings half spread. The nest, partially hidden lay between. Our collecting boxes soon contained its nine chocolate-brown beauties which we marked Columbian Sharp-tailed Grouse. We soon discovered a small lake surrounded by bulrushes. As it appeared to be a favorable locality we staked out the ponies and proceeded to explore it. I'll not go into details. But in the course of an hour we had taken two sets of Mallard eggs one sixteen in number and the other fifteen, one set of nine eggs of the Gadwall and one set of ten of the Ruddy Duck. Also four sets of Coots eggs the largest numbering fourteen, together with several sets of Yellow-headed Blackbirds. We left one set of the Pintail Duck that were heavily incubated and fourteen sets of Coots. We proceeded on our way. In passing over a stretch of land that was strewn with boulders we observed many Night-hawks setting on the rocks apparently asleep. They would allow us to approach within a few feet before flying. As we came up over a slight elevation of land we got our first view of Devil's Lake.

We were somewhat astonished to see the town of Minnewaukan not far distant, and the lake looked as though it had lost its grip, about all that could be seen was a good sized mud hole. After taking a set of the Swainson's Hawk from a nest in a piece of timber close by we once more turned our horses heads towards Graham's Island. We followed a well worn trail for many miles and then turned off into the timber. Here we discovered a log cabin with three young men in possession. One of them conducted me to a well about twenty rods away where I refilled our bottles and jug. He was anxious to know our business so I explained as far as possible. He said he knew of some Ducks nests in trees but did not want me to take the eggs, as his "partner" would be angry if they were in this way sacrificed to the cause of science and then perhaps the aforesaid "partner" would have less Ducks to slaughter and throw away, a very common practice as far as I could learn. By the use of a little silver I finally persuaded him to point out the trees. I expected to find Hooded Mergansers, but to my joy they proved to be American Golden-eye. Both nests were in elm trees. One contained ten eggs, the other thirteen. The nests composed of white down were placed within eighteen inches of the opening. One nest was within fifteen feet of the ground. The other was placed in a hollow branch perhaps twenty-five feet. I had quite a hat full of eggs but still had room for a set of Parkman's Wren that were snugly hidden in an old rubber boot that hung on the side of the cabin. But I did not take them as the "partner" was coming to see what delayed us. To get rid of an argument and save time I passed around the back of the cabin, jumped into the wagon and took French leave. We soon reached the end of the island or rather peninsula. The only boat there was useless so we could not visit the islands

where the Ring billed Gulls and Common Terns nested. Here we camped for the night using Buffalo skulls for seats and slept under the wagon. I will not describe at the present time our discomfort, but between the mosquitoes and the preparation to keep them away that burned like fire on our parboiled skins, between the smoke and intense thirst (caused by alkali water) and the drenching we received from a rain storm during the night. I think it will be many a long day before I forget that night's camp on the shore of Devil's Lake.

The next day's search rewarded us with one set of eight eggs of American Golden-eye. Also one set of Purple Martin taken from a hollow in a tree. The tree that contained the Duck nest had a huge nest of the Red-tailed Hawk in which were two young in the down and one egg. Our second night's camp was on the prairie not far from Grand Harbor. The next day we spent most of our time at what is locally known as Lake Alice. There we found a colony of Night Herons. Had we been so minded we could have taken hundreds of Coot's eggs around this lake. Several pair of Swainson's Hawks had placed their bulky nests in bushes not over six feet from the ground. Some one had scraped the eggs out of them and broke them except in one instance where we picked up three eggs in a perfect state. A set of Shrike's eggs completed our finds for the day. We reached Cando that evening in due time well pleased with our trip and our heads full of plans for a longer one to the Turtle Mountains.

EDWIN S. BRYANT,
Phoenix, N. Y.

Late Nesting.

It may be of interest to the readers of the OÖLOGIST to know that on October 5, 1893, the nest of an Arizona Gold-

finch was discovered by the sharp eyes of a small boy.

The nest was situated in the branches of a peach tree, about seven feet from the ground. When discovered the nest contained two eggs of a light blue color without markings.

On October 10th, I again visited the nest and found it to contain four eggs.

The bird and nest were both taken. The bird is now mounted upon the edge of her nest in my collection. A short time after this another boy found a nest of the same species with young birds in it.

E. DE LAY PALMER.

San Bernardino, Calif.

An Early Find.

Who would think of looking for the nest of our smallest bird in January? Well, January 30th of this year found me gazing up into a cypress tree for no other purpose than to see the nest of an Anna's Hummingbird and the bird sitting. I was soon up the tree but found it impossible to look into the nest without taking it from the limb. This I did and it contained only one egg. I was undecided whether to replace the nest and leave it for a complete set or be sure of one. I soon resolved to wait for No. 2 and so placed the nest back on the limb.

Next day I returned and the bird was there as if she had never been disturbed. Going up and finding still only one egg. I thought as she had resolved to stick by the nest I would give her time to lay that second egg. The next day there were two which I took with nest.

The nest had been used last year and was repaired very little for new house-keeping. It was fifteen feet from the ground on a horizontal limb one-half inch in diameter just where there was a small twig branching off to the side which helped to keep it in place.

This is the earliest record I have seen in the columns of the OÖLOGIST and is

an unusual circumstance as this bird will usually desert its nest if disturbed.

HARRY R. PAINTON,
College Park, Cal.

The Golden Eagle in Indiana.

I have been a hunter in different parts of this State, and never saw this grand bird until Dec. 10th, 1893.

While hunting in the woods near Denver, I had laid down my gun, and was watching a ground hog. Suddenly hearing a noise resembling a large sky rocket, as it goes through the air. I jumped to my feet and looking up saw a large bird coming from above with its wings almost closed. It came within 20 feet of my head, and then sailed off and perched on a tree about 100 yards away. I went to my gun and just at that moment I heard the same noise and again looking up saw another coming from above like an arrow straight at me. He came to the top of the trees and then alighted, and I fired both barrels of my gun at him and wounded him badly, but he succeeded in getting away, and the other one soared up until it was only a mere speck in the sky, and then left me. These birds were, I think, five or six hundred feet high when they started to descend, and they came straight down. On the 22d of Dec. 1893 a farmer killed one while it was fighting a dog over a chicken he had caught, and I bought it of him. It measured seven feet and four inches across the wings. I mounted him and have it in my collection, and prize him above all other specimens.

I have been a hunter for 30 years, and my father has hunted for over 60 years, but neither of us ever saw the Golden Eagle in this State before.

C. F. FITE.
Denver, Ind.

THE OÖLOGIST,

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You Are a Judge.

Your decision must be mailed us not later than the *tenth* day of June. Write on back of a postal card the five articles which *you* have decided to be the *most valuable, instructive and interesting* in this number of OÖLOGIST and mail to us. Number the articles in the order which you think the prizes should be awarded.

We give our Judges five prizes having an aggregate value of over \$5, one to each of the five whose decisions are nearest the final award of Mss. prizes.

Golden-winged Warbler.

(*Helminthophila chrysoptera*, LINN.)

This handsome little Warbler is quite abundant in this section of the State, and a number of collectors' cabinets contain them. My cabinet contains two sets, one of three and one of four eggs.

On May 19, '92, while collecting in a low marshy tract of land, I flushed a bird from her nest and after some searching found it built under a tussock of grass. The nest was composed of leaves and grass and lined with fine vegetable roots. The nest contained three eggs of the usual color and were slightly incubated, so I have no doubt as to their being a full set.

My second set was taken in the same vicinity but was built in a bush one foot from the ground. The nest was built of the same material and contained four of the handsomest eggs I ever saw. The ground color was of a creamy white, regularly spotted and blotched with umber, chestnut and gray, the spots large and distinct.

The eggs bear the closest resemblance to each other of any set of eggs I have ever taken.

I have noticed that this bird is very fond of moist and swampy land, covered with tussocks of grass and stunted bushes and can be found in these places throughout the breeding season.

F. C. HUBBARD,

Geneva, Ohio.

My First Set of Pine Siskin's.

As I have never written for the OÖLOGIST, I thought its readers might like to know how I collected my first set of Pine Siskin. It came about in this way.

A collector friend, Wm. L. Finley, used to come to my home Saturdays to spend the day collecting.

One Saturday morning, bright and early, we shouldered our boxes and gun, and with the dog, we started on a trip.

We started down a small stream and when we had gone a short distance, Will wanted to stop and get something out of the box. While he was thus engaged I began to look among the trees for nests. All at once I spied something that looked like one, up in a fir tree about forty feet from the ground.

Will, said I. that looks like a nest, and he told me to go up and see, so I went across the creek and climbed the tree and saw a bird on the nest, I scared her off and then saw four eggs, but the nest was out on a limb about six feet.

I had Will bring up a box, a piece of rope and a sling shot. When he got up where I was, we tied the rope out on the limb as far as we could, then we fastened it securely to the tree above our heads, then began to saw it off, it fell across another limb so all we had to do was to pull it in and we had the prize.

I then asked Will what kind it was and he said that he did not know, but took out his sling and killed the bird, so we were able to tell it was a Pine Siskin.

We found many other nests that day, but none so rare as the Siskin. Tired and weary, we retraced our steps homeward, and after partaking of a hearty lunch, we drew cuts to see which would become the owner of the set of Pine Siskin's, I drawing the lucky "cut," secured the prize.

Since then I have found a number of nests of the same species.

RAY STRYKER,
Milwaukee, Oregon.

An Elevated Killdeer's Nest.

While collecting, May 31, 1893. I found a nest of Killdeer containing five eggs slightly incubated, and situated in a corn field, on top of an old stump,

which was about three inches high.

Nest, a slight hollow in the rotten chips.

A very unusual occurrence I think.

J. E. GRAHAM.

Waterloo, Ind.

APRIL CONTEST.

Eighty-four Judges.

'Prize winners and credits received by each were as follows:

1. Scenes from the Life of Alexander Wilson, 310.
2. Maryland Birds that Interest the Sportsman, 281.
3. The American Crow, 228.
4. A Disastrous Season on Pelican Island, 135.
5. Hints about Data and Field Books, 103.

The Judges' prizes were awarded as follows:

1. No. 70—F. A. Colby, Beatrice, Neb. Exact.
2. No 16—W. H. Myles, 53 Arkledun St., Hamilton, Ont. 1, 2, 3, 5, 4.
3. No. 59—Erle Morton, No. 517 N. 2d St., Leavenworth, Kans. 1, 2, 3, 5, 4.
4. No. 75—Fred McAllister, Davison, Mich. 2, 1, 3, 5, 4.
5. No. 66—H. L. Heaton, Oberlin, Kans. 2, 3, 1, 4, 5.

As the following Judges were exactly as near the winning articles as Judge No. 66, we awarded each a 5th prize.

- No. 71—Egbert Bagg, Utica, N. Y. 3, 2, 1, 4, 5.
- No. 72—L. P. Williams, Redlands, Calif. 3, 1, 2, 4, 5.

The following also named the prize winning articles:

- No. 13—H. T. Van Ostrand, Mass.
- No. 15—R. A. Campbell, N. H.
- No. 22—F. W. Parkhurst, N. Y.
- No. 38—H. A. Washburn, Mass.
- No. 41—B. H. Douglas, Kans.
- No. 42—C. H. Finne, Ark.
- No. 62—R. C. McGregor, Calif.

All prizes were mailed on May 10th.

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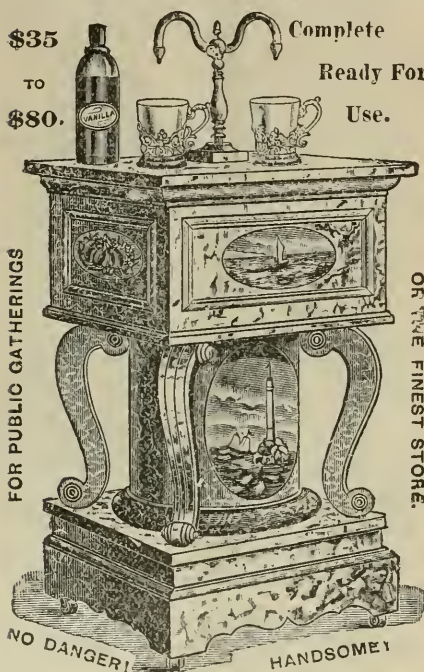
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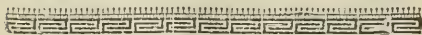
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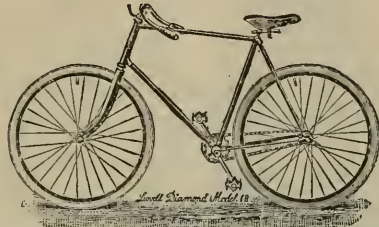
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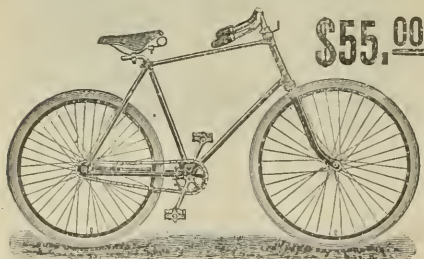
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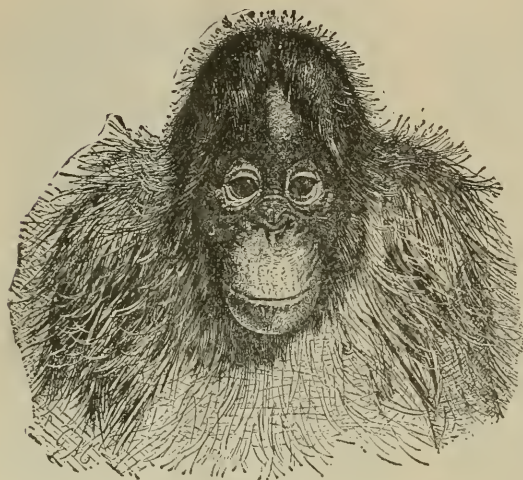
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VOL. XI. NO. 6.

ALBION, N. Y., JUNE, 1894.

WHOLE No. 104

Wants, Exchanges, and For Sales.

Brief special announcements, "Wants," "Exchanges" "For Sales," inserted in this department for 50c per 35 words. Notices over 35 words, charged at the rate of one cent per each additional word. No notice inserted for less than 50c. Terms, cash with order.

"DEALERS" can use these columns at *Regular Advertising rates, only*. Strictly First-class specimens will be accepted in payment at one-half list rates. Exchange Cards and Coupons (subscription) will be accepted for "Wants" and "Exchanges" only and according to conditions stated thereon.

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Do You Remember

whether you have paid your subscription to the Oölogist for 1894? If not you have not will doubtless receive the circular letter mailed you.

We trust you will notice at the bottom of same the **Special Offers** outlined thereon. This is a matter that should have your immediate attention.

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THE attention of Oologists and Ornithologists is called to adv. of new directory in another column.

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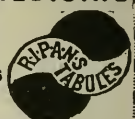
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THE OÖLOGIST.

VOL. XI. NO. 6.

ALBION, N. Y., JUNE, 1894.

WHOLE NO. 104

Notes from Audubon's Biography.

FRED W. PARKHURST.

Part I.

John James Audubon, the subject of this sketch, and one of the most thorough and conscientious naturalists who ever lived, was born in the state of Louisiana, May 4, 1780.

Before he had hardly learned to walk and prattle those first words so endearing to parents the productions of Nature, which were so bountifully spread before him, became his constant companions; and before his ideas were sufficiently formed to enable him to estimate the difference between the azure tints of the sky and the emerald hues of the bright foliage, he felt that nothing less than a life devoted to the constant study of the beautiful and wonderful in Nature would content him. None but aerial companions suited the fancy of the young Audubon. His father generally accompanied him on his trips to the woods, procuring birds and flowers for him with great eagerness,—pointed out the elegant movements of the former, the softness and beauty of their plumage, the manifestations of their pleasure or sense of danger,—and the always perfect forms and attire of the latter. His father would speak of the migration of the birds, their many haunts, and their change of livery. This alone was enough to influence the mind of Audubon towards Nature irresistibly, inclined as he was by instinct from the cradle.

As Audubon grew up his wishes took form, and these wishes were to possess everything which came within the range of his vision. He was fervently desirous of becoming acquainted with Nature, but the moment a bird was dead,

no matter how beautiful it had been in life, the pleasure arising from the possession of it became blunted. He wished to possess all the productions of Nature, but he wished life with them. This was impossible, and in his disappointment he turned to his father for aid. Quick to appreciate the situation he produced a book of illustrations. The leaves were turned over eagerly, and although what he saw was not what he longed for yet it gave him the idea of copying Nature. To Nature he went, but was sorely disappointed, when, after several years of constant effort he found that his productions were worse than those which he regarded as bad in the book given him by his father. His pencil gave birth to a family of crippled, ill-formed objects. Hundreds upon hundreds of these sketches were produced annually, and for a long time, at Audubon's request, they made bon-fires of them on the anniversary of his birthday.

Soon after Audubon went to France and studied design under the eminent artist David. He returned from Paris at the age of seventeen, and from that time his drawings assumed a form. On his arrival in America he betook himself to the woods with fresh ardor, and commenced a collection of drawings, which were subsequently published under the title of the "Birds of America."

In Pennsylvania Audubon's father gave him in his desire to always prove a friend to him, a "beautiful plantation," traversed by a creek called Perkioming. Its fine woodlands, extensive fields and evergreen-crowned hills offered many a subject for his pencil. It was here that his study of the birds of America was really commenced.

In the year 1808 he fell in love with and married Lucy Bakewell, and she

ever proved to be a faithful and loving sharer of all his joys and sorrows. Soon after his marriage Audubon became a merchant of Louisville, Ky., but the same lack of success pursued him in this business as in all others which he laid his hand to. His heart was in the study of Nature, and all other employments were drudgery to him, and only to be tolerated under the most extreme circumstances. He would undertake long journeys, ransack the woods, the lakes, the prairies and the shores of the Atlantic. Years were spent away from his family, yet he had no object in view other than to enjoy the sight of Nature in all her varied aspects. Never for a moment did he conceive the idea of becoming useful to his fellow-men, until he accidentally formed the acquaintance of the Prince of Musignano in Philadelphia. He reached the Quaker City on April 5, 1824, and with the exception of Dr. Mease, he had scarcely a friend in the whole city. Audubon called upon him and showed him some of his drawings, and by him was presented to the justly celebrated Charles Lucian Bonaparte, who in his turn introduced him to the Natural History Society of Philadelphia. But the patronage which Audubon so much needed he was compelled to seek elsewhere. From Philadelphia he went to New York, where he was received with a kindness well suited to elevate his depressed spirits. From New York he ascended the Hudson crossed the Great Lakes and sought the solitude of the pathless forests. After the lapse of eighteen months Audubon returned to his family, who were then in Louisiana. He explored every portion of the woods around and at last sailed for the Old World.

Before we follow his steps to Europe it might be as well to give an idea of the true greatness of the work which Audubon was striving to accomplish. Merely to state that each drawing was

life size would be a trifle vague. Not only were the objects as a whole full size, but also every portion of each object. The bill, feet, legs, claws and even the very feathers as they projected one beyond another, were accurately measured. The birds in nearly every case were killed by Audubon, and were; after he had examined their motions and habits as much as the case admitted, drawn on the spot where shot.

An accident happened to two hundred of Audubon's original drawings which well nigh put a stop to his researches in ornithology. Having business in Philadelphia, he left the village of Henderson, Ky., where he resided for some years, and started out on the long journey. Before his departure he took all his drawings, placed them carefully in a wooden box, and gave them in charge of a relative, with injunctions to see that nothing should happen to them. After an absence of several months he returned to Henderson, and almost immediately inquired for his "treasure" as it pleased him to term it. The box was produced and opened, but what was his dismay to find that a pair of Norway rats had taken possession of the whole, and among the gnawed bits of paper which but a few months before had represented nearly a thousand birds, had reared a family. The burning heat which instantly rushed through Audubon's brain was too great to be endured without affecting his entire nervous system. He slept not for nights, and days passed in oblivion, until the animal powers being recalled into action, through the strength of his constitution, he took up his gun, note-book and pencils and went forth to the woods as if nothing had happened. He even felt pleased that he now might make much better drawings than before; and, ere a period not exceeding three years had elapsed, his portfolios were filled once more.

[To be continued.]

My Loquacious Pet.

During the last week of June, '84 I came across a pair of young Blue Jays that had fallen out of their nest. Their wing feathers were yet too short to assist in flight, so that I had little difficulty in catching them. On reaching home I put them in a large cage. They hopped about a while and then squatted down in a corner. On being disturbed they opened wide their black, crow-like beaks, showing their pink tongues. They soon learned to know me, and would flutter their wings and cry for me to cram Mocking Bird food into their cavernous mouths.

In spite of my constant attention one died. The other was fed several times a day for some weeks and finally learned to pick for himself.

Two months later, his wings and tail took on a gaudy, blue metallic color, banded by narrow stripes of black. The dark oval which hung on his neck like a horse's collar became glossy black. "Doc" was now certainly a handsome pet.

Like all other beauties he had a tendency to be sly and mischievous. When loose in the room he would hide a thimble or a button under the cushion and then seize pin after pin, throwing them over his shoulder until none but those deeply driven into the cushion remained. During all these antics, his large crest was ever rising and falling in a manner just as expressive as a horse's ears.

If I was reclining on the sofa, Doc would fly and nestle close against my cheek, and then run his beak between my lips. Besides being a loving, affectionate pet, he was an excellent ball player, seldom miffing a cotton pellet, swiftly thrown from a distance of eight or ten feet.

These were not his only accomplishments. His vocal achievements surpassed his athletic feats. With the ex-

ception of the pretty double whistle or yodle, Doc gave all the notes of the wild Jay, including many soft whistles, trills and chuckles.

My playmates announced their arrival by a peculiar, shrill yell, which my pet soon reproduced so accurately as to deceive me. Occasionally he whistled to the dogs, and then battered against the wires in terror as they pranced sheepishly about the cage.

My grandfather, being a feeble old gentleman, was in the habit of calling to the hired man at the barn many times during the day. One sultry afternoon my grandmother became alarmed by the incessant calling to the hired man. She rushed about the house in breathless anxiety lest some accident had befallen her husband. He had been fast asleep on the lounge and was not pleasantly impressed to be awakened so unceremoniously. As they were explaining and discussing the matter, they heard in the exact reproduction of my grandfather's voice, Ed-ward! Ed-ward! Ed-ward! Stepping softly to the door, my grandmother caught Doc in the act of calling.

Some months later, Doc tried to call Maggie, but he was never able to say anything but Mag-ward, though I used to stand by and yell "*ie, ie, Magg-ie,*" at the top of my lungs.

In '86 my Jay was swapped for some pigeons and seventy-five cents. In his new home he heard a lady call her deaf husband very loudly, and soon learned to yell Henry! Henry!

Doc's end was tragic. In former days he would kill and eat a mouse, but in his new home he met with rats instead of mice. One dark and howling rainy night the rats made war on Doc and slew him in revenge.

SYLVESTER D. JUDD.

Now is the best time in the whole year to secure new subscribers for the OÖLOGIST.

Migration of the Chimney Swift.

It is often said that one swallow does not make a spring, but I feel safe in saying that one 'Chimney Swift' in a locality is fairly conclusive evidence that spring has come to stay. This bird, often called a Swallow, which it resembles in many ways, not infrequently appears north of the 40th parallel by April 20th, and it is not unusual to have flurries of snow after this date, and sometimes several days of disagreeable weather. However, although the appearance of the venturesome 'blue-backed' swallow in March is not rarely followed by sleighing, and occasionally by good skating, the Swift rarely appears till the balmy breezes of late April blow, and never while there is a particle of frozen ground.

In my trips to Florida one of my principle pleasures lie in taking bird notes, and my return to the north is somewhat governed by the movements of the migrating birds. When at Palm Beach, Lake Worth, Florida I saw the first Swift March 21, '94. This locality lies between the 26th and 27th parallels.

Passing north I did not meet with this bird again till March 29th at Micco, on the Indian River, at about 23 degrees north latitude. At Sanford, Orange county and Kissimmee, Osceola county in the interior, the birds were seen in abundance April seventh. Common at Tampa April 8th and evidently nest building on the 12th. Abundant at Cedar Key, Florida, an island in the Gulf of Mexico, April 16th. April 17th the birds were found plentiful at Jacksonville, Florida.

On the 19th of April I found many birds at Savannah, Ga. In Chattanooga, Tenn., April 25th, the Swifts were seen, and also in Kentucky the 21st. Here I found the American Red Bud, *Cercis canadensis* in full bloom, a tree which usually blooms about May 5th to 10th in Southern Michigan.

At Cincinnati the Swifts were common also at Wilmington, a small place N. E. of Cincinnati and in about 39½ degrees north latitude. The birds acted at home; as if they had been there several days. On April 23d the Swifts were found plentiful at Fort Wayne, Indiana.

Reached home, Kalamazoo, Michigan, between the 42d and 43d parallel at noon April 24, '94 and though I looked carefully for Swifts I failed to find them. On the 25th a few were seen, and on the 26th they appeared plentiful.

The 8th of May the birds began courting and two and three males may be seen chasing one female. This stage lasts for a couple of weeks or more, but most of the Swifts are to be seen flying in pairs by May 20th, after which date they are devoted to nesting.

MORRIS GIBBS.

A Day With the Coopers's Hawks.

The Cooper's Hawk* is one of the most abundant species in the family in the Great Lake Region and it is fair to call it second in point of numbers only to the Red-shouldered Hawk. This rating may not accord with the estimates of many ornithologists, but I believe all old collectors and careful observers will agree with me. Many young collectors do not know this species, while they are quite well acquainted with the two common buzzard hawks. This results from the retiring habits of this bird, which is rarely observed by the ordinary stroller, while the soaring Red-tail and noisy Red-shouldered, with their conspicuous nests are often well known.

This Hawk breeds abundantly in Southern Michigan, and many sets of eggs are taken by the enthusiastic col-

* The Cooper's Hawk is written of in 'The Raptures of Michigan,' OöLOGIST, April, 1889, giving several notes as to nesting habits.

lectors in the month of May. The earliest full set of eggs was collected April 22d, and I believe the latest date for a fresh set, first clutch, is May 29th. The best time to look for the eggs is during the first half of May.

My friend K. W., who has developed into a great climber and collector of Hawk's and Owl's eggs, invited me to go out with him on a trip for Cooper's and knowing his proficiency, from previous agreeable trips, I eagerly accepted.

We started one bright morning in the second week in May to go over a portion of his 'Cooper route.' A portion he calls it, for the whole circuit is over sixty miles, with all its ins and outs and could not be well accomplished in less than three days. We had been out one day, but it proved rainy and windy and the result was only a dozen eggs. These circuits he had mapped out for years, and has on all possible occasions visited the various clumps of woods and kept account of the active clattering Cooper's Hawks. In his cross-country trips, when he goes for the larger Hawk's nests, it is but little trouble to look up the more tardy species. In fact, to the true naturalist, all of these walks and notes are only in the nature of labors of love.

Away we went with a dash, behind his fast stepper, and made nearly four miles without a pause, where K. handed me the reins and began buckling on his climbing irons, while the mare was still making good time.

Reaching an oak grove at the side of the road, he leaped out, climbed the fence and disappeared in a few seconds. In less than five minutes he returned to the carriage with four fresh eggs. Inside of thirty seconds the eggs were packed and we were dashing on to another quarter, while my companion explained that the nest just visited was only 22 feet up in a white oak and less than ten rods from the highway. He

said the nests were usually built in white oaks, but that he had found them in black oak, hickory, beech, maple and ash.

After a mile's trot my companion left me and struck across a field to an isolated patch of dense oak woods, where he had located a prospective set the previous week. The birds however still proved dilatory. After this examination he cut across lots to another piece, motioning me to drive on down the road. In this way he visited several groves, and travelled all of two miles, and I kept track of him and was guided by a wave of his hand as to my route. On his return he showed a fine set of fresh eggs, and reported seeing five nests, four of which he inspected by the aid of his climbing irons. In one nest there was a single egg, which of course he left.

The Cooper's Hawk often builds in proximity to a barn yard and seldom far removed from the habitation of man in this region. Very often a pair is found nesting in a small patch of trees within a hundred yards of a barn and I know of one nest which was built within half of that distance of a house. However, if one does not keep his eyes and ears on the alert, nothing will be known of the presence of this bird, and much less of its nest.

This is the most destructive Hawk to the chicken yard, and the agriculturist is well aware of it, and is always on the lookout for 'them tarnal blue-backed chicken hawks,' as he calls them. But at the same time that he is heaping maledictions on this bird, and loading his musket with a charge which would fix a bear, the swift flying Cooper's is nesting in safety less than a hundred rods away in the same piece of wood where it has nested for many years.

As the horse wended his way over the road to the next likely spot K. told me that the nests which he had just visited were respectively 45, 40 and 35 feet

from the ground. "The highest nest which I ever found" said he, "was 60 feet up in an ash tree and the one nearest the ground was at only 15 feet elevation in a white oak and the average is about 35 feet. The nests do not average as high as the nests of the Buzzard Hawks and are not as easily found as they are. The only way that I can account for the lower catalogue price of Cooper's Hawk's eggs is because this species nests in trees easier to ascend and the number of eggs in the sets is larger. For the nests are certainly much more difficult to find than the Buteo's nests. In fact, if one takes into account the large number of old squirrel's nests which are climbed to by inexperienced collectors, then the actual work for the average set of blue-back hawk's eggs is fully equal to that of any other species which nests in Michigan.

"It is very foolish to climb to any Hawk's nest until one knows that the birds have been about it for the season, and I rarely spend time on a nest unless I see or hear the birds in the vicinity. It is unusual to find two pairs of Hawks of one species occupying one patch of woods at a time. So when I see a Cooper about, I run through a grove, pick out the most likely nest, and if it is proper time for them, I climb the tree. One can judge by the sticks on the grounds under the nest as to the progress made, for all Hawks drop material in nest construction.

"I rarely have to climb to a Hawk's nest more than twice for the eggs and if I am much in the woods and have a chance to observe fully, then one ascent is usually sufficient. Taking all the species of Hawks here, and the actual number of climbs made, I believe that the ascents will average me nearly or quite two eggs, while some inexperienced collectors whom I have met, will climb a dozen trees to get a single set of eggs. Everything depends on observation, and to successfully visit

Hawk's nests is as much a subject of study as the hunter's love which enables him to secure game where the green-horn will fail."

We now reached a large woods, and as the fence was down we drove in by a meandering old wood road. The pleasure was accorded me of witnessing my friend make an ascent to a nest. The old bird was seen to leave the nest and was heard clacking as she flew about. From the moment that K. left the carriage until he returned with the set of five eggs, it took him just four minutes and twenty-seven seconds. It was a beautiful set, unusually blue, and with numerous small spots of brown.

It was now past the noon hour and visiting a farmer's house where we procured some milk, we ate our lunch and continued our search. Passing near a heavy oak woods we saw a Red-tailed Hawk perched near a nest in a large white oak, and K. climbed to the nest, more as a matter of curiosity than with hopes, as he had robbed the same over five weeks previously. He found a young bird and an addled egg.

"Ordinarily it does not pay to spend time on any nests except the one species which you are in search of. The collector who goes out with an idea of general collection usually fails, as does the amateur gunner who sets out with the intention of shooting a variety of game. If one is collecting Cooper's Hawk's eggs, that's enough for one trip, and to do well no attention should be given to any thing else."

In the course of a mile we came to a dense piece of woodland where the smaller trees and underbrush grew very thickly about and made walking almost impossible. Here we found a nest in a small black oak at not over twenty feet from the ground, in a very dense part of the wood. Any boy could have climbed that tree in two minutes, but very few amateur oölogist's would have thought of looking in

this situation for a Hawk's nest. My friend had heard the clacking notes near by and had reasoned that the nest must be in the patch. Three eggs were in this set, which, though not a complement, were taken.

A mile further on a nest was visited which was built in a tall spindling beech. It exactly resembled one of those squirrel's nests we so often see in the woods, and would not have tempted any one not familiar with the bird's ways.

This article will overtax your readers so I will bring it to a close. During the day my companion secured twenty-nine Cooper's Hawk's eggs, all of which were in excellent shape for an addition to his perfect collection. Four of them were given to the writer of this article, who will sign himself as an

OLD TIMER.

Some Winter Bird-Life.

A winter tramp, on a sunny day, is not so bad, after all, if one is dressed warm but light. To slip on the leggins and shooting coat, with its assortment of shells in their respective pockets, shoulder the twelve guage and leaving the town and its millions of Sparrows, walk up the valley along the creek into and through the woods and groves, and visit the springs where it is well to see that the gun is not loaded with dust shot, and to be ready for a pair of Fish Ducks (Hooded), or perhaps a small flock of that greatest of all Ducks, the Mallard for here, where it rarely, if ever, freezes, is where we will find the first two on my list of winter birds. Of course neither are as abundant during the coldest winter months as in other parts of the year, but occasionally you will strike them and one Mallard in December is worth a half dozen Black-heads or other Duck during the best of the fall shooting.

Here, at the spring, we will probably

see Chickadee too, that gay little black-capped fellow who comes into our yards and around our door on the coldest January mornings, with his merry *chick-a-dee-dee*, begging for crumbs. His near relative, the White-breasted Nuthatch, another hardy resident of our northern states, will probably be found not far away. His queer note, the *quank, quank*, can be heard a great distance in the sharp morning air and sometimes we make quite a long walk before we come up to him, scrambling up and down some large forest tree, over the limbs and under them,—no Woodpecker can rival him in this, his method of breakfast hunting

As we turn to leave the spring a loud *caw, caw, caw* suddenly attracts our attention upward, and there, over the grove to our right, flying in a bee line for somewhere, and probably knowing exactly where he is bound for, is a single Crow, no, not single for there, over the trees, another one appears, two more, and another, all filing after the leader. No use to dodge down now, they see you already and turn up and to the left, far out of range of the gun. To capture a Crow this time of year requires much patience, and you can rarely do it by hiding as they appear, coming your way, they always turn out. I have laid in wait in a corn field in the late fall, when the youngsters had grown as wild and wary as their parents, for a full hour, before I got a shot at one, and before I came they were flying continually over my hiding place. After I was there, however, they seemed to "smell a rat" and always turned out for me. Finally though, an extra large single bird—you have probably noticed that single birds are always more easily deceived than flocks—came flying directly over me and paid the penalty for his carelessness by receiving my charge of seven, full force, and his shiny black skin now lies on its

back in my cabinet, and I never look into that particular tray without thinking how hard earned a Crow that was for such an abundant species. In the summer and early fall, however, Crows are quite easily secured, but are not in as nice condition for specimens as the harder procured winter ones.

We will now turn, up into that grove from whence we hear the continued *tap-tap-tap-ety-tap*, of some small Woodpecker—either a Downy or Hairy probably, as these are the only common ones in the winter. After a careful and quiet search we discover the particular tree where the little spotted tree-climber is at work for his breakfast. He is on the other side of that limb, we will walk around and get a good look at him but where is he—oh yes, he is trying to keep well out of sight by following that limb around as fast as we walk. There he goes, in a short quick, upward flight into the top of the second or third tree, a Downy, as his small size tells.

As we emerge from the edge of the grove a large flock of probably a hundred Prairie Chickens make quick work of leaving the two or three large, bare-limbed oaks on the very edge of the field, and in quick flight, make for the direction of the marsh. We walk across the open field toward the large woods, where we will find different birds of the winter. As we near the old rail fence from whence comes the familiar *chip, chip* of the Tree Sparrow or "Winter Chip Bird," a large fat rabbit jumps out and in long, quick leaps makes for the better cover of the hazel patch, but he is not quick enough, for just as he nears the hazel, two more leaps would make him safe, the gun is on him, hastily pulled ahead and fired and with a full somersault bunny lies at the edge of the cover, your lawful meat. The report of the gun scares a large Hawk from the edge of the wood but he makes rather quick work in get-

ting out of harms way, and as the left barrel is charged with dust—'tis always so—he makes good his escape with his skin whole.

We enter the wood; fox and gray squirrels are seen peeping at us from around some limb or scampering away out of harms reach, but we will not shoot squirrels—they are not fit game for a hunter's gun. A dozen Blue Jays and half as many Crows are making a fearful racket a little ways ahead, let us push on and see what the matter is. On our approach the Crows abandon the field for safer places and the Jays scatter in all directions, but if we sit quite still in the hazel brush the latter are soon back and we discover the cause of all this disturbance. A large Barred Owl, poor fellow, is the target for all this bird-cursing on the Jays part, for I have no doubt but that they were calling him every name in bird language. He does not, however, seem to mind it, hardly moving an inch as a couple screeching Jays swoop past his head. Finally, though, he seems to tire of the noise and persecution and with a silent flopping of wings is off for the thicker part of the wood.

A few steps farther on, and, with a loud whirr of wings a Ruffed Grouse—locally called Partridge—rises from the sunny side of a stump and in rapid, rising flight makes for some sheltering tree over the hill. Now look out, where there is one Partridge there are probably more. Another step or two ahead and from the branches of a low tree directly in front of you another one flies, a pity you couldn't have seen him a minute before, but such is Grouse hunting. You hardly make another step forward before the whole covey rises, six or eight of them and if you are quick and true enough perhaps you bag one or two, but more likely not! A Ruffed Grouse is a quick bird in the cold winter months and hard to get a bead on. If we follow the covey up

we will, nine chances out of ten, find them hugging the limbs of the trees, just over the hill-top ahead, but without a dog it is almost impossible to discover which tree or limb before they are off and gone.

If we keep on into the wood we will probably meet with that bold chicken thief the resident Great Horned Owl, or perhaps if it has been cold enough the past week or two, a specimen of the rare winter visitant, the Snowy or White Owl. A Hawk or perhaps an Eagle, soars gracefully far above us, as we take our lunch on the sunny side of the wood and watch the Crows file across the fields, and listen to the merry note of the Chickadee, as he comes up closer and closer as if he wanted to get acquainted.

We turn and cross the creek, where a musk rat quickly makes a plunge under the ice at our approach, and a little ways farther down pause at an open spot to watch shiners, chub or dace as they sport in the icy creek and think we will remember this stream for some good bait, when black bass catching begins again next June.

The sun has nearly gone down and the birds have entirely disappeared, as we reenter the grove on our homeward tramp. Not a *chick-a-dee-dee*, *quank* or *tip* of the little spotted Woodpecker is heard, they have all sought their nightly resting places, the three species last mentioned of probably in some hollow tree or old Flicker's nest.

As we enter the village a loud *trill* greets our ears and lets us know that our good friend, the little Screech Owl has begun his nightly raid on the English Sparrow in the thick evergreens and hedges. May he grow fat on their worthless little bodies.

N. HOLLISTER,
Delevan, Wis.

The Whip-poor-will.

(*Antrostomus vociferus*.)

Bordering the valley of the Kaw, on either side for a distance of some forty miles westward from the mouth of the river, are continuous ranges of low hills broken by numberless little valleys.

These rough, untillable tracts of land, covered with a scrubby growth of Black Jack and Post oak, interspersed frequently with dense thickets of saplings and underbrush, afford a comparatively safe retreat for those birds which haunt the native woodlands. It is in these hills that I have spent the greater portion of my years and it is here that I have learned to know the subject of this sketch.

Securely hidden during the light of day, in his secret abode, the Whip-poor-will waits until all the members of the feathered tribe, with few exceptions, settle down to quiet and repose before he comes out to help the Owl relieve the monotonous quiet of the summer night. Rapidly like a faint shadow he darts this way and that pursuing his favorite prey. Shrouded by the friendly darkness, he intrudes boldly in the very habitation of man, and mocks all attempts to spy him out.

How often in my boyhood days have I been startled and even momentarily frightened by the shrill piercing words, "*Whip-poor-will, Whip-poor-will.*" How unearthly these sounds seemed to me then, yet how much have I since learned to love them and to look forward eagerly in the spring time for their first clear tones. Had I felt the fascination of oölogy during those early days I might have had a long series of "No. 417" on my list for many a time have I pursued a fluttering bird through brush and saplings, entirely oblivious of the two precious beauties which lay almost in my path. But it is not my province to lament lost op-

portunities but to treat of what actually came into my possession.

When I received my first "check-list" after the awakening of my interest in oölogy I quickly saw that I had passed during my rambles many a precious egg and resolved to make up for lost time.

Early in April of the following spring I started with spurs and bucket to search for eggs of the Turkey Vulture. I was passing through a dense thicket of post oak when I was surprised by a bird's starting up at my feet and pitifully dragging herself with flapping wings through the underbrush. Instantly, I recognized the Whip-poor-will. Looking carefully, I soon discovered two eggs lying on a thick bed of leaves. I forgot all about Turkey Vultures, and turning, returned home. The eggs were typical of the species—elliptical in shape—of a creamy white ground color spotted evenly with lavender and lilac. They were perfectly fresh.

In the latter part of May I located another nest containing one egg, and carefully noted its position. Returning in a couple of days later, expecting to find the set complete, I could find no trace of either egg or bird although I searched most thoroughly. This puzzled me greatly at the time but I have learned since that the bird often moves her eggs or even young when her home is disturbed. I have never had the fortune to see a bird removing her household treasures, but it is said she takes them in her capacious mouth in order to perform the feat.

My unceasing efforts found no further reward in the Whip-poor-will line until quite late in the season. On the 4th day of July Mr. Williamson and I concluded to celebrate the day in the manner most pleasing to ourselves and took a tramp in the woods which resulted in the finding of a fine set of fresh eggs of this species. The following year

I was not able to find a single egg, although I searched repeatedly every thicket within my reach. During the succeeding collecting season I was much more fortunate for six nests came under my notice, one of which contained hatched young.

It will be seen from these results that the bird is an irregular summer resident here, some years being very rare and at other times being quite common. Of the eggs which I have taken two sets were distinctive.

The eggs of one were unusually long and thickly marked with very dark lilac. The other set was remarkable for its beauty, having the delicate lilac and lavender spots so systematically arranged that the effect was most striking. This set, the most beautiful that I can ever hope to take, now adorns the cabinet of Mr. C. Barlow of California as it has since passed into his hands.

The eggs of the Whip-poor-will are readily distinguished from those of other similar species. All eggs of the Whip-poor-will have the general elliptical shape, although they vary slightly in measurements, and all have the lilac and lavender coloring in various degrees of intensity upon a background of creamy white.

I have found the bird nesting invariably in thickets almost impenetrable to the rays of the sun. She does not take the trouble to build a nest, but deposits her two eggs in some chosen spot, usually on a bed of leaves by the side of an old log or dead limbs. Yet, the very carelessness of the parent serves most effectually to conceal her treasures which are with difficulty distinguished from the surrounding leaves. The only sure way of finding the eggs of the Whip-poor-will is to search thoroughly and frequently every dark thicket in the neighborhood. However one may often locate the vicinity of a nest by going out in the evening

and listening to the first call of the female which is uttered just before she leaves the nest to feed. □ After the birds have taken wing it is useless to try to trace them as they take no further notice of their nests until they have had their frolic and are ready to return to the nest. It is probable that the male performs the duties of the female while she feeds, but as I have no definite authority for it I merely offer it as a seasonable suggestion.

I trust this may at least benefit some who live where the Whip-poor-will is known to breed, but who have not, as yet, been successful in locating their nests. If I succeed in this my efforts will not be amiss.

P. C. CHADWICK,
Loring, Kas.

Notes on the Barn Swallow.

The Barn Swallow made its first appearance, for this year, in this locality, April 29th. Although the season has been remarkably early it has made not the slightest difference in the arrival of this bird. From a record which was kept for a long term of years, of the arrival of this bird, and which is now before me, I find that its earliest arrival was April 21st and its latest was May 2d—only 11 days variation. It departs for the south about the middle of August.

Its nests, almost invariably, in the roof of an old barn. It lays four or five and rarely six eggs, which are white, spotted with brown; and it rears two broods each year. Its nest is a curious affair, made of mud, into which are mixed a few straws or long hairs, just enough to give it a stringy appearance when torn in pieces, but seldom enough to be seen when the nest is entire. Sometimes the horizontal surface of a beam, or shelf is occupied as a nesting place, but generally, by some myster-

ious process, the nest is glued to the perpendicular side of a rafter. No attempt at concealment is ever made. The old nests are often repaired and used year after year, and it would seem, sometimes, at least, by other than the original builders. I have seen a nest, which, as I was told by an old man, had been occupied every year, for more than forty years.

Speaking of nests I am reminded of a most curious, triple nest which I once found. I was hunting in an old barn for Swallow's eggs, when I noticed this nest high in the gable. I climbed to it and found that a Chimney Swift had first built its nest of little twigs, curiously interlocked and glued together, and cemented to the barn with an adhesive substance, which this bird secretes in its stomach. Then a Phoebe had utilized this nest as a shelf upon which to build its own nest of moss, cemented with clay. And lastly a pair of Barn Swallows had, built their nest of mud, above and partially resting upon that of the Phoebe. I mention this as being all the more curious, for the reason that the Chimney Swift rarely nests in barns, and the Barn Swallow seldom makes use of a projection upon which to build its nest. Upon two other occasions I have seen a Phoebe using the nest of a Barn Swallow as a shelf upon which to build its own nest.

The Barn Swallow may be called gregarious, but it is much less so than its cousin, the Cliff or Eave Swallow. It is rare to find more than a dozen pairs of Barn Swallows occupying the same barn, but it is not at all uncommon to see fifty or more nests of the Eave Swallow ranged side by side, each nest joining its neighbor. The Barn Swallow is very peaceably inclined towards most other birds, and it is not unusual to find its nest in close proximity to the nest of a Chimney Swift, a Phoebe, or a Robin. In fact, it was only a few days ago, that I noticed a

pair of them industriously engaged in building a nest, within an arm's reach of the nest of a Robin, and have seen nests within a few inches of the nest of a Phoebe, but I do not know that both nests were occupied at the same time. But, let a Hawk, or an Owl, or a similar bird approach and this Swallow will become a perfect demon of ferocity, savagely attacking and actually driving from the field a bird for which it would hardly make a mouthful. Its method of attack is to circle around its victim, and suddenly make a dive towards it, generally aiming for its eyes, and by its own wonderful agility, avoiding a return stroke; it will again circle and return to the attack. I have no knowledge of any bird being seriously injured by the Barn Swallow, but I have often seen it attack, and put to flight both Cooper's Hawk and the Sharp-shinned Hawk.

Its powers of flight are marvelous. Wilson estimated that in its ordinary flight, it's speed would average more than a mile a minute, for ten hours in each day. In rapidity and gracefulness of it's evolutions, no bird with which I am acquainted, with the exception of its near relative, the Eave Swallow, can compare with it. True, the Hummingbird may be able to dart more rapidly from flower to flower, and to change it's course more quickly: but its flight is erratic, and in an abruptly, zig zag direction, while that of that of the Swallow is regular and graceful, and in long, sweeping curves.

By watching it's flight one may judge somewhat of the coming weather, for, while in pleasant weather it will always soar high in the air, just before a storm it will fly very close to the ground, sometimes almost touching the tall grass. Doubtless this is owing to a similar habit of the insects of which it is in pursuit. It is purely insectivorous, and invariably takes it's food upon the wing; and, although it has been ac-

cused, and perhaps justly, of destroying the honey bee, it is regarded as one of the most beneficial of birds.

C. O. ORMSBEE,
Montpelier, Vt.

A Crank.

How often we have seen him hurrying off early in the morning to return laden with what he calls treasures. Treasures indeed! Weeds, flowers, bugs and birds which perhaps we have never seen. Always eager to be off on his rambles, preferring this to other sports, and returning with a calm, happy air whether he has found his treasures or is tired, empty-handed and be-dragled with mud and dust.

Perhaps he is also an ardent disciple of Isaak Walton, and a prospective Nimrod. Willing to take countless tramps and come back empty handed as cheerfully as when attended by better luck.

Now you and I call this fellow a "crank." What can be the attraction in such pursuits. True his collections are pretty, but he doesn't seem to care for that alone. He will grind out an endless strain on the wonders of this and that, which may happen to be a commonplace plant or bug. We contemplate him with a sort of patronizing pity that he should fritter away his time in such an unprofitable manner.

Ah! my friends could you but read his inmost thoughts you would see your pity worse than wasted. It is *he* who can *pity*, for your lack of enthusiasm, that you live on unmindful of the beautiful things around you. He is a crank because he loves Nature and delights in delving among the secret wonders with which her storehouses are filled, *yes*, even to overflowing. More than this, he realizes in these wonders the manifestations of his Maker, in the whispering forest in the joyous songs of birds and insects, in the murmur of the rill,

and in the thunder of the waves. He holds communion with Nature on his rambles and is thus led nearer his God. His mind is elevated and enriched. His soul is uplifted and filled with reverence and praise for Him who created this beautiful world and filled it with wonders which most of us know but little, perhaps not at all. Whoever studies Nature with such feelings derives much good therefrom, and his life is enobled.

Reader, if this little article causes a change in your opinion of some "crank" (?) and opens up some empty corner of your heart to the warm glow of Nature, then its mission will have been successful.

"ORTYX."

The Wren-Tit or Ground Tit.

This is one of the characteristic birds of California, combining the traits of the Wrens as well as those of the Titmice. These birds inhabit the foothills, canons and dry bushy plains all over southern California.

The Wren-Tit is one of the many birds that stay all the year round in southern and Lower California. The Wren-Tit's whistle can be heard all day long in the thick brush on the hillsides and in the washes, its music is generally confined to the low monotonous whistle which is prolongedly a trill, except when it is disturbed, then it will scold the intruder with its cat-like cries. These birds can always be identified by their whistle, after a person has once heard them.

The Wren-Tit is confined to the coast region of California, with the exception of those found in Lower California. The nest is usually built in the thick grease wood, in canons on the hillsides. It is composed of little twigs and soft woody fibres, and is lined with grass and hair. It is made so that it looks like an old nest.

The birds set so closely and look so

much like the nest that the whole looks like an old bunch of sticks or a last year's nest. The inside of the nest is from two to two and a half inches in depth by two and a half in width. The nest is placed in the fork of some bush and is generally about three feet from the ground.

Although the birds are quite numerous in Southern California, the nests and eggs are quite difficult to find.

The birds are quite Wren-like in appearance, and have a habit of holding the tail erect and twitching it nervously from side to side. The birds resemble the California Brown Towhee in color. They are a plain brown above, the tail is long and has faint dark bars on it. Beneath it is pale cinnamon with throat and chest faintly streaked with dark. They are about six and a half inches long.

When the bird is on the nest it is quite tame and will let you come within a few feet of it, and then it will slip off the nest so quietly that you can hardly catch a glimpse of it. When the bird leaves the nest it will run along the ground under the bushes for a few yards and then suddenly appear with its mate and begin to scold you from a short distance, with a series of scolding cries. If you move on for a few yards the birds will follow to see if you are going away, then the female will slip back to watch the nest. If you return, the birds will become bolder than they were at first.

The eggs are of a pale greenish blue color without spots or other markings. The eggs will fade if left in the light. The average measurement of the eggs is about .70 by .53 inches. The usual number of eggs that I have found in a set is three, although I have found two fine sets of five.

The breeding season is from the middle of April until the last of June.

W. B. JUDSON.

Protect Our Birds.

It appears to me that the Oölogist of today seems to think it his especial duty to destroy all the birds and eggs which come within his reach. As this is practiced by collectors who know much more of Ornithölogy than myself, I may be wrong. But it seems to me the true lover of nature and the works of Providence could not, with a clear conscience, destroy so many of our beautiful feathered creatures.

By very little reading I can find many instances where collectors collect from five to twenty-five sets of the same species, the eggs having no material difference in number, size and markings. Even if they should differ somewhat, the peculiarities could be put down in a note book, as every good Oölogist keeps such a book.

One person has taken, this season, twenty-two nests and sets of the humming-bird. I hope, but hardly think, they are all different species.

Another writer found a good breeding place of one of the Ibises, and ends his article by saying he took about two hundred of their eggs, or about sixty sets. I cannot understand why one or two sets would not have sufficed.

If this wholesale destruction of our birds continues, what will become of them? Ornithölogists agree that many species are becoming very scarce. Now, we do not want to exterminate them, with the exception only of the English Sparrow or as Davie fitly calls them, "the rats of the air."

OTTO GRADY.

Ludlow, Ky.

Reappearance of Bald Eagles in South-East Michigan.

From time to time I have noted the reappearance of various birds in this portion of the country, their return to

regions they formerly frequented after a lapse of many years.

The latest I have to chronicle is the return of the Bald Eagle. Last fall Mr. [John W.] Stacy, reported meeting two Bald Eagles. One was killed near the eastern border of Pontiac township, Oakland county, and the other was met with alive along a branch of Stoney-Creek, in western Macomb county, near the boundary of Oakland county. They have also been reported from Wayne and other counties along the eastern coast of this state.

WILFRED A. BROTHERTON,
Rochester, Mich.

Vireonidæ in Iowa.

This is a family of birds that are much oftener heard than seen. Next after the Warblers, the Vireos are the most delightful birds of our forest, they address the ear and not the eye. Clad in the simple tints that harmonize with the verdure these gentle songsters warble their lays unseen, while the foliage itself seems stirred to music. In the state of Iowa there are six members of this family.

Red-eyed Vireo, *Vireo olivaceus*. Arrives from the south about the last of April and is common throughout the state. It has a loud, energetic song, which is never out of tune, from the time it arrives, until it departs early in October, from early morning, through the burning heat of noon and on into the night, whether it is raining or no, go to any woodland and you will be sure to hear it.

Langille says, "some writer has made it especially articulate in the following lines:"

Pretty green worm, where are you?
Dusky-winged moth, how fare you,
When wind and rain are in the trees?
Cheeryo, cheerebly, chee,
Shadows and sunshine are one to me.

Mosquito and gnats, beware you,
 Saucy chipmonk, how dare you,
 Climb to my nest in the maple-tree?
 And dig up the corn
 At noon and at morn?
Cheereyo, cheerebly, chee.

It's small cup shaped pensile nest, is hung from the twigs of some shrub or tree, anywhere from a few to thirty feet from the ground, this is completed by the first of June, and the four white eggs, speckled with dark brown spots at the large end, are laid, they measure about .80x.62.

A nest I collected last season and which is now before me on my desk, is composed of pieces of bark, fine grass and webs of spiders and caterpillars, lined with fine shreds of grape vine bark.

The Cowbird's egg is often found in the nest of this species.

Warbling Vireo, *Vireo gilvus*. This Vireo breeds plentifully throughout the state, arriving about the 25th of April. It is just about as full of song as the Red-eyed, from some group of tall elms along the street you hear it's liquid notes in tones as sweet, that it would seem as if the air melted in them, the very soul of tenderness and affections is breathed out upon the ear. This song compared to that of the Red-eyed is a much softer and more prolonged warble.

The nest, which is usually built in a maple, in the door-yard, or in an elm along the street, is suspended in the fork of small twigs at the extremity of a branch and usually at the height of from twenty to fifty feet from the ground, however, it is not always at that height, sometimes only a few feet from the ground.

Mr. Rudolph M. Anderson of Hancock Co., Ia., writes, "I found a nest of the Warbling Vireo suspended from a low drooping limb of an ash tree, only about five feet from the ground."

The nest is somewhat deeper and more substantial than that of the Red-

eyed, but composed of about the same material.

The eggs are four or five in number, of a pure white color, sparingly dotted at the larger end with markings of black and brown. The specimens measure about .75x.56.

Yellow-throated Vireo, *Vireo flavifrons*. Not as common as the former species, rather scarce in Henry county, although it's brighter colors make it more conspicuous than the Red-eyed and Warbling.

Mr. Anderson reports it "common in Hancock county; June 18, 1891, I found a nest of this species, which was suspended from a small crotch about twenty feet from the ground, and composed of dried grass, cottony substances, thin pieces of bark, moss and this nearly entirely covered over with small pieces of newspaper, lined with fine strips of grape vine bark. The nest contained four fresh eggs and one egg of the Cowbird."

Mr. J. Eugene Law writes, "This species is not uncommon at Lake Mills, Winnebago county. This spring, 1893, found one nest which was deserted when two Cowbird's eggs were laid in it."

Mr. H.M. Savage of Van Buren county found a pair of Yellow-throated Vireo's building their nest in June, 1892, the nest was completed, but before all the eggs were laid a Blue Jay was rascal enough to destroy the eggs and tear the nest to pieces. It was placed in a hickory, thirty feet from the ground and composed of much the same material as the Red-eyed except there was a good deal of moss and newspaper about it.

The eggs are four in number, and are easily distinguished from other Vireo's by having the ground color of a roseate tinge and the spots of dark brown much more over the entire egg. Specimens measured about .85x.65.

The song of this species is much like

the Red-eyed, although not near so finely modulated and rather shrill, it resembles the words, *weeco, weeco-ee, wee-ree*, etc.

This bird is easily distinguished from the former species, by the yellow on the breast and also by being a shade larger.

It departs for the south by the middle of September.

DAVID L. SAVAGE,
Salem, Ia.

A Little Advice.

To those who are interested in Oölogy and are desirous of making a collection of eggs may find the following helpful to them.

First, in making a collection of eggs it is of the utmost importance that each and every specimen should be *fully* identified. The only sure way to do this is to secure the old bird at the same time, unless the collector is *thoroughly* familiar with the breeding habits and eggs of the specimen in question. As Capt. Bendire says: "A small, thoroughly identified, well prepared and neatly cared for collection, even if only a local one, is worth far more scientifically and in every other way than a more extensive one obtained by exchange or purchase."

The majority of collectors have a printed label data which they always keep with the egg. All eggs should have as much dirt removed from them as possible before blowing as it is then easier to get off.

Eggs should be blown through *one* small hole drilled in the *side*, forcing the contents out by blowing into the hole with a blowpipe. Do not hold the egg too tightly between the fingers or as Mr. Davie says, "you will learn that a thing of beauty is not always a joy forever."

In blowing small eggs you will find an egg holder handy. It is made by

taking a piece of wire about seven inches long and bending both ends into the shape of circular loops. Again bend your wire in the center so that the loops face each other, and the holder is finished.

Do not try to blow eggs while in the field if you can possibly help it, as you do not have the facilities there that you do at home or in camp, and then again you are apt to be in a hurry and break your eggs; but pack them up neatly in small boxes fitted with small apartments, lined with cotton or moss.

You should *always* have a notebook with you in which you should put down everything of interest pertaining to the eggs collected.

Many valuable specimens are lost on account of improper packing, when being sent by mail or express. Eggs should never be sent in anything but tin or wooden boxes which should be lined with cotton. Then *each* egg should be securely wrapped in cotton and placed snugly in rows and layers in the box.

In marking eggs permanently it is well to put the date, A. O. U. No. and number of eggs in set, on the shell (near the drill hole) with a soft lead pencil.

Egg collections are as a rule kept in the drawers of a cabinet, which are partitioned off into different compartments partly filled with fine sawdust or sheet cotton. It is well to scatter camphor gum through the drawers as a preventative of insects.

The above is meant for the true lover of nature and not for the ordinary so-called collector, who delights in massing together large numbers of eggs and the slaughtering of our beautiful songsters and "screening their fiendish acts under the gauzy lace of *Science*."

KELLOG DURLAND,
Dorchester, Mass.

Mr. Francis Cope Jr., of Germantown, Pa., writes as follows: "The back numbers of the OöLOGIST, which I ordered of you on the 13th inst., have arrived safely and I am highly pleased with same; in fact I consider them almost *invaluable* to the ornithologist and oölogist."

THE OÖLOGIST.

A Monthly Magazine Devoted to
OÖLOGY AND ORNITHOLOGY.

F. H. LATTIN, & CO., Publishers.
ALBION, N. Y.

FRANK H. LATTIN, WALTER F. WEBB,
Editors.

Correspondence and items of interest to the student of Birds, their Nests and Eggs, solicited from all.

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*. Articles, Items of Interest and Queries for publication should be forwarded as early in the month as possible.

ENTERED AT THE POST OFFICE AT ALBION, N. Y., AS SECOND-CLASS MATTER.

Henslow's Sparrow in Michigan.

Please record in the columns of the OöLOGIST, the taking of *Ammodramus henslowii*. Henslow's Sparrow in southeastern Jackson county, Michigan, on May 12, 1894. A flock of seven observed and one male secured.

Dr. R. H. Wolcott and L. Whitney Watkins were with me at the time. This bird was included in my list of Michigan birds of 1881, and has been

very much doubted by certain would be Ornithologists, and it gives me great pleasure to secure the specimen. More could have been taken if we had so wished, but we preferred to leave the rest in hopes of their nesting there. We will return on May 30th for a three days outing. Shall take my setter dog "Partner," trained to find ground nesters and diligent search will be made to find their nests.

ADOLPH B. COVERT.

Mr. Henry K. Coale, the Assistant Ornithologist of the Field Columbian Museum, Jackson Park, Chicago, writes: "I will be pleased to receive for examination specimens of *Dendroica aestiva*, Yellow Warbler, from all parts of the country and will return same promptly giving credit for notes made, etc."

Never in the history of American Ornithology has more good systematic work from an intelligent basis been in progress than at the present time. This is especially noticeable, and we might add more highly commendable, among our younger ornithologists. Of late nearly every issue of the OöLOGIST contains one or more calls or notices in reference to State or District organization in order that the work may be furthered more understandingly.

In this month's OöLOGIST we print the complete list of North American Birds as revised to date—the first list, we believe, incorporating the '94 changes and additions, published—we also give as far as possible the value of the skins of each species as far as a combination of data in hand and our knowledge on the subject will permit.

We are well aware that, undoubtedly, many species have been erroneously priced—either too high or too low and as we desire to make this list the recognized standard by all American Ornithologists—we most earnestly invite

suggestions and corrections in relation to typographical errors as well as to valuation.

The corrected list will be stereotyped on July 1st hence the importance of mailing your suggestions not later than June 20th.

We have received from Prof. T. D. Richardson, Instructor of Natural Sciences in the Washington High School of Jacksonville, Ills., a copy of his "Model Herbarium and Plant Record." We have given our copy a most careful examination and unhesitatingly pronounce it the best thing of its kind that has ever been brought to our notice. Below we enumerate a few of the Author's claims of merit for the work, all of which we most heartily endorse, and would further advise all of our readers, having botanical inclinations, to send him \$1 for a copy:

1. The size is 8x11 inches. This is large enough for the purposes of the ordinary collector and not so large as to be cumbersome.

2. The binding is such as to allow the book to spread when filled with plants and not injure it in the least.

3. The descriptions occupy the page opposite the plant and a turning of leaves is not necessary when the plant and description are compared.

4. The paper used in these books is very heavy and of good quality and makes an excellent Herbarium paper.

5. The best methods of collecting, pressing and mounting plants are presented in a simple and concise manner.

6. The Key to the Terms Used in Descriptions contains all the terms and spaces for illustrating each by a written definition and a drawing. Experience has shown that this is an excellent method for fixing the terms and their meanings in the mind of the pupil. No other Herbarium has this arrangement.

The MODEL HERBARIUM has grown to its present form with the needs of the Author's classes and is now offered with the confident belief that it has a place in the botanical work in schools that has not been filled by any of the numerous Herbariums, Plant Records and Analyses that have been published.

You Are a Judge.

Your decision must be mailed us not later than the *first* day of July. Write on back of a postal card the five articles which *you* have decided to be the *most valuable, instructive and interesting* in this number of OöLOGIST and mail to us. Number the articles in the order which you think the prizes should be awarded.

We give our Judges five prizes having an aggregate value of over \$5, one to each of the five whose decisions are nearest the final award of Mss. prizes.

BIRD SKINS!

LOW RATES for JUNE ONLY

Prices are for A 1 Specimens.

Order quick. If you don't see what you want write for it. We have a big lot, as per large list in this issue.

American Coot.	\$ 60
California Quail.....	60
Gambel's Quail.....	1 00
Scaled Quail	75
Large Hawks, several species.....	1 60
Redbreast Merganser.....	1 00
Mallard.....	1 00
Black Mallard.....	1 25
Baldpate.....	1 25
Green-wing Teal.....	1 00
Blue wing Teal.....	75
Shoveller.....	1 00
Pintail.....	1 25
Redhead	1 50
American Scaup.....	1 25
Lesser Scaup.....	1 25
American Goldeneye	1 10
Old Squaw.....	1 25
Eider.....	1 50
Ruddy Duck.....	1 00
Fulvous Tree Duck	1 25
Evening Grosbeak.....	60
Prairie Horned Lark.....	30

A series of seventy-five specimens of above will sell cheap. Different localities.

Blue Jay.....	25
Steller's Jay.....	1 25
Screech Owl.....	75
Royal Tern.....	1 00
Man O'War, young in Down....	1 00
Great Blue Heron.....	2 00
Greater Yellow Legs.....	75
White-throat Sparrow.....	20
Snowflake.....	25

About 50 large and small skins, defective in some way, occasionally broken neck, etc., our selection, 15 cents each.

These are worth double this amount for study.

New lot of mammal skins just in. Fine Armadillo, \$7.50.

Large Lizard skins, three feet, \$3.00

Mountain Lion skin, fair, \$8.00.

Ocelot skins, fine for rugs, \$4.00, small, \$2.50.

We are receiving new lots of skins daily and would be pleased to hear from all Collectors and Taxidermists who wish to purchase good material at prices that conform to the existing hard times.

F. H. LATTIN & CO.,
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BIRD SKINS.

With a complete list of the Birds of North America, arranged according to the A. O. U. Check List.

TERMS.—Orders under \$1.00 for skins which do not exceed eight inches in length, must be accompanied by five (5) cents to cover postage. Large orders for the same size will be sent postpaid. Large specimens will be sent by express; if wanted by mail, postage must be added. Skins sent by mail will be carefully packed, but no risk will be taken.

The prices quoted are for the poorest and best specimens. Specimens of intermediate grades at proportionate prices.

The numbers in the first column correspond to the A. O. U. Check List. Those in the second column to Ridgway's Nomenclature of North American Birds.

1	729	Western Grebe	.....	\$1 25	\$2 00	73	689	Aleutian Tern	.....	2 00	3 00
2	731	Holboell's Grebe	.....	1 50	2 50	74	690	Least Tern	.....	60	1 20
3	733	Horned Grebe	.....	75	1 50	75	691	Sooty Tern	.....	1 25	2 50
4	734	American Eared Grebe	.....	1 00	1 50	[76]	692	Bridled Tern	.....	2 00	3 00
5	735	St. Domingo Grebe	.....	50	1 00	77	693	Black Tern	.....	50	1 00
6	735	Pied-billed Grebe	.....	50	1 00	[78]	694	White-winged Black Tern	.....	1 50	2 00
7	736	Loon	.....	2 00	4 00	79	695	Noddy	.....	2 00	3 00
8	737	Yellow-billed Loon	.....	4 00	7 00	80	696	Black Skimmer	.....	50	1 00
9	738	Black-throated Loon	.....	4 00	6 00	81	700	Black-footed Albatross	.....	6 00	8 00
10	739	Pacific Loon	.....	4 00	6 00	82	701	Short-tailed Albatross	.....	6 00	8 00
11	740	Red-throated Loon	.....	1 50	3 00	[83]	702	Yellow-nosed Albatross	.....	8 00	10 00
12	745	Tufted Puffin	.....	1 50	2 50	84	703	Sooty Albatross	.....	8 00	10 00
13	743	Puffin	.....	1 25	2 00	[85]	704	Giant Fulmar	.....	8 00	10 00
13a	743a	Large-billed Puffin	.....			86	705	Fulmar	.....	3 00	4 50
14	744	Horned Puffin	.....	3 50	4 50	86a		Lesser Fulmar	.....	
15	746	Rhinoceros Auklet	.....			86b	705a	Pacific Fulmar	.....	
16	751	Cassin's Auklet	.....	3 00	5 00	86c	705b	Rodger's Fulmar	.....	
17	747	Paroquet Auklet	.....	3 00	5 00	87	706	Slender-billed Fulmar	.....	8 00	10 00
18	748	Crested Auklet	.....	3 50	4 50	88		Cory's Shearwater	.....	3 00	5 00
19	749	Whiskered Auklet	.....	3 00	4 50	89	709	Greater Shearwater	.....	1 50	2 50
20	750	Least Auklet	.....	2 50	4 50	[90]	711	Manx Shearwater	.....	2 50	3 00
21	753	Ancient Murrelet	.....	3 00	5 00	91	710	Pink-footed Shearwater	.....	
22	759		.....			92	712	Audubon's Shearwater	.....	3 00	4 00
23	755	Marbled Murrelet	.....	2 25	4 00	93	713	Black-vented Shearwater	.....	
24	756	Kittlitz's Murrelet	.....			94	714	Sooty Shearwater	.....	3 00	4 00
25	757	Xantus's Murrelet	.....			95	715	Dark-bodied Shearwater	.....	
26	758	Craveri's Murrelet	.....			96	716	Slender-billed Shearwater	.....	
27	760	Black Guillemot	.....	1 00	2 00	[97]	707	Black-tailed Shearwater	.....	
28	760	Mandt's Guillemot	.....	2 00	3 50	[98]	717	Black-capped Petrel	.....	
29	761	Pigeon Guillemot	.....	1 50	2 00	[99]		Scaled Petrel	.....	
30	763	Murre	.....	1 00	2 00	100		Fisher's Petrel	.....	
30a	763a	California Murre	.....	1 50	2 00	[101]	718	Bulwer's Petrel	.....	
31	764a	Brunnich's Murre	.....	1 00	2 00	[102]	719	Pintado Petrel	.....	3 00	5 00
31a	764	Pallas's Murre	.....			103	720	Least Petrel	.....	3 00	5 00
32	742	Razor-billed Auk	.....	1 50	2 00	104	721	Stormy Petrel	.....	1 50	3 00
33	741	Great Auk	.....			105	726	Fork-tailed Petrel	.....	2 50	4 00
34	752	Dovekie	.....	1 00	1 50	106	723	Leach's Petrel	.....	1 00	1 25
35	696	Skuia	.....	3 50	5 00	106.1		Guadalupe Petrel	.....	
36	697	Pomarine Jaeger	.....	2 00	3 50	107	724	Black Petrel	.....	
37	698	Parasitic Jaeger	.....	1 25	2 00	108	725	Ashy Petrel	.....	3 00	5 00
38	699	Long-tailed Jaeger	.....	2 50	3 50	109	722	Wilson's Petrel	.....	1 00	1 50
39	657	Ivory Gull	.....	3 50	4 50	[110]	738	White-bellied Petrel	.....	
40	658	Kittiwake	.....	75	1 50	[111]		White-faced Petrel	.....	
40a	658a	Pacific Kittiwake	.....	1 25	2 50	112	654	Yellow-billed Tropic Bird	.....	3 50	5 00
41	659	Red-legged Kittiwake	.....	5 00	7 50	113	655	Red-billed Tropic Bird	.....	3 50	5 00
42	660	Glaucous Gull	.....	2 00	4 00	[114]	651	Blue-faced Booby	.....	
42.1		Point Barrow Gull	.....			114.1		Blue-footed Booby	.....	
43	661	Iceland Gull	.....	3 00	4 00	115	652	Booby	.....	3 00	5 00
44	662	Glaucous-winged Gull	.....	2 00	3 00	115.1		Brewster's Booby	.....	
45		Kumlien's Gull	.....			[116]	653	Red-footed Booby	.....	4 00	6 00
46		Nelson's Gull	.....			117	650	Gannet	.....	3 00	4 00
47	663	Great Black-backed Gull	.....	2 00	3 00	118	649	Anhinga	.....	2 00	3 50
48		Slaty-backed Gull	.....			119	642	Cormorant	.....	3 00	3 50
49	664	Western Gull	.....	2 00	3 00	120	643	Double-crested Cormorant	.....	2 00	3 00
[50]	665	Siberian Gull	.....			120a	643a	Florida Cormorant	.....	1 50	2 50
51	666	Herring Gull	.....	1 50	2 00	120b	643b	White-crested Cormorant	.....	
51a	666a	American Herring Gull	.....	1 50	2 00	120c		Farallone Cormorant	.....	
52	667	Vega Gull	.....			121	644	Mexican Cormorant	.....	2 00	3 00
53	668	California Gull	.....	1 50	2 00	122	645	Brandt's Cormorant	.....	1 75	3 50
54	669	Ring-billed Gull	.....	1 00	1 50	123		Pelagic Cormorant	.....	
55	670	Short-billed Gull	.....	2 00	3 00	123a	646	Violet-green Cormorant	.....	3 00	4 00
[56]	671	New Gull	.....	1 25	1 75	123b	646a	Baird's Cormorant	.....	2 00	3 50
57	672	Hermann's Gull	.....	3 50	5 00	124	647	Red-faced Cormorant	.....	
58	673	Laughing Gull	.....	1 00	1 50	125	640	American White Pelican	.....	4 00	6 00
59	674	Franklin's Gull	.....	1 00	1 50	126	641	Brown Pelican	.....	3 00	6 00
60	675	Bonaparte's Gull	.....	75	1 50	127		California Brown Pelican	.....	3 00	6 00
60.1		Little Gull	.....			128	639	Man-o'-War Bird	.....	4 00	6 00
61	676	Ross's Gull	.....			129	636	American Merganser	.....	1 25	1 75
62	677	Sabine's Gull	.....	4 00	5 00	130	637	Red-breasted Merganser	.....	1 00	1 50
63	679	Gull-billed Tern	.....	50	1 00	131	638	Hooded Merganser	.....	1 00	2 00
64	680	Caspian Tern	.....	1 25	2 00	132	601	Mallard	.....	1 25	1 75
65	681	Royal Tern	.....	1 25	2 00	133	602	Black Duck	.....	1 25	1 75
66	682	Elegant Tern	.....			134	603	Florida Duck	.....	1 50	2 50
67	683	Cabot's Tern	.....	1 00	1 50	134a	602	Mottled Duck	.....	2 00	3 00
[68]	684	Trudeau's Tern	.....			135	604	Gadwall	.....	1 25	2 00
69	685	Forster's Tern	.....	75	1 00	136	606	Widgeon	.....	1 50	2 00
70	686	Common Tern	.....	50	1 00	137	607	Baldpate	.....	1 50	2 00
71	687	Arctic Tern	.....	75	1 00	[138]	611	European Teal	.....	1 50	2 00
72	688	Roseate Tern	.....	75	1 25	139	612	Green-winged Teal	.....	75	1 25

140	609	Blue-winged Teal	150	2 00	219	579	Florida Gallinule	40	75
141	610	Cinnamon Teal	150	2 00	[220]		European Coot	1 00	1 25
142	608	Shoveller	150	2 00	221	580	American Coot	1 50	1 00
143	605	Pintail	150	2 00	222	563	Red Phalarope	2 00	3 50
144	613	Wood Duck	150	2 50	223	564	Northern Phalarope	75	150
[145]		Rufous-crested Duck	2 00	2 75	224	565	Wilson's Phalarope	1 50	75
146	618	Redhead	150	2 50	225	566	American Avocet	1 75	1 25
147	617	Canvas-back	150	2 00	226	567	Black-necked Stilt	1 00	1 50
148	614	American Scaup Duck	150	3 00	[227]	574	European Woodcock	1 50	1 50
149	615	Lesser Scaup Duck	150	2 00	228	525	American Woodcock	1 75	1 50
150	616	Ring-necked Duck	1 25	1 75	[229]	526	European Snipe	1 00	1 25
151	620	American Golden-eye	1 25	1 75	230	526a	Wilson's Snipe	50	75
152	619	Barrow's Golden-eye	1 50	2 25	231	527	Dowitcher	60	1 00
153	621	Buffle-head	1 00	1 50	232	527a	Long-billed Dowitcher	60	1 00
154	623	Old-squaw	1 00	2 00	233	528	Stilt Sandpiper	75	1 25
155	622	Harlequin Duck	1 50	3 00	234	529	Knot	50	1 00
156	624	Labrador Duck			235	530	Purple Sandpiper	40	60
157	625	Steller's Duck	4 00	6 00	236	531	Alutian Sandpiper	1 75	2 50
158	626	Spectacled Elder	9 00	12 00	237	532	Prybilof Sandpiper		
159	627	Northern Elder	2 50	3 50	238	533	Sharp-tailed Sandpiper	2 75	3 50
160	627a	American Elder	2 00	3 00	239	534	Pectoral Sandpiper	30	50
161	628	Pacific Elder	2 00	4 00	240	536	White-rumped Sandpiper	50	75
162	629	King Elder	5 00	7 00	241	537	Baird's Sandpiper	60	1 00
163	630	American Scoter	1 50	2 25	242	538	Least Sandpiper	20	30
[164]	631	Velvet Scoter	2 00	2 50	242.1		Long-toed Stint		
165	632	White-winged Scoter	2 00	2 50	[243]	539	Dunlin	1 00	1 50
166	633	Surf Scoter	1 75	2 25	243a	539a	Red-backed Sandpiper	35	75
167	634	Ruddy Duck	75	1 50	244	540	Curlew Sandpiper	1 00	1 50
[168]	635	Masked Duck			[245]	542*	Spoon-bill Sandpiper		
169	591a	Lesser Snow Goose	3 00	4 00	246	541	Semipalmated Sandpiper	25	40
169a	591	Greater Snow Goose	3 00	4 00	247	541a	Western Sandpiper	75	1 00
169.1	590	Blue Goose	3 00	4 00	248	542	Sanderling	35	75
170	592	Ross's Snow Goose	4 50	6 00	249	543	Marbled Godwit	1 00	1 50
[171]	593	White-fronted Goose	2 50	3 50	250	544	Pacific Godwit	3 00	4 50
171a	593a	Amer. White-fronted Goose	2 50	3 50	251	545	Hudsonian Godwit	1 00	1 75
172	594	Canada Goose	2 50	3 50	[252]	546	Black-tailed Godwit	1 25	1 50
172a	594a	Hutchin's Goose	2 50	3 50	[253]	547	Green-shank	1 25	2 00
172b	594c	White-cheeked Goose	3 50	4 50	254	548	Greater Yellow-legs	1 75	1 00
172c	594b	Cackling Goose			255	549	Yellow-legs	50	75
173	595	Brant	2 00	3 00	256	550	Solitary Sandpiper	25	75
174	596	Black Brant	3 00	4 00	256a	550	Western Solitary Sandpiper	50	1 00
[175]	597	Barnacle Goose	3 00	3 50	[257]	551	Green Sandpiper	1 25	2 00
176	598	Emperor Goose	10 00	15 00	258	552	Willet	75	1 50
177	599	Black-bellied Tree-duck	1 00	1 75	258a	552	Western Willet	75	1 50
178	600	Fulvous Tree-duck	1 00	1 75	259	553	Wandering Tattler	1 50	2 50
[179]	586	Whooping Swan	8 00	10 00	[260]	554	Ruff	1 25	1 50
180	588	Whistling Swan	5 00	7 00	261	555	Bartramian Sandpiper	50	75
181	589	Trumpeter Swan	5 00	8 00	262	556	Buff-breasted Sandpiper	50	1 00
182	585	American Flamingo	8 00	15 00	263	557	Spotted Sandpiper	20	40
183	585	Roseate Spoonbill	2 00	7 00	264	558	Long-billed Curlew	1 00	1 50
184	601	White Ibis	1 00	2 00	265	559	Hudsonian Curlew	1 00	1 50
[185]	602	Scarlet Ibis	5 00	8 00	266	560	Eskimo Curlew	1 00	2 00
186	503	Glossy Ibis	2 50	3 50	[267]	561	Whimbrel	1 00	1 50
187	504	White-faced Glossy Ibis	2 50	3 50	[268]	562	Bristle-thighed Curlew	1 00	1 50
188	500	Wood Ibis	2 00	4 00	[269]	512	Lapwing	75	2 00
[189]	499	Jabiru			270	513	Black-bellied Plover	1 25	2 00
190	497	American Bittern	1 00	1 50	[271]	514	Golden Plover	75	2 00
191	498	Least Bittern	50	1 25	272	515	American Golden Plover	75	2 50
191.1		Cory's Least Bittern			272a	515a	Pacific Golden Plover	1 50	2 50
192	486	Great White Heron	10 00	15 00	273	516	Killdeer	30	50
193		Ward's Heron	3 00	5 00	274	517	Semipalmated Plover	25	40
194	487	Great Blue Heron	2 00	3 00	275	518	Ring Plover	75	1 50
[195]	488	European Blue Heron	2 00	2 50	[276]	519	Little Ring Plover	1 00	1 25
196	489	American Egret	2 00	3 50	277	520	Piping Plover	20	50
197	490	Snowy Heron	2 00	3 50	277a	520a	Belted Piping Plover	50	1 00
198	491	Reddish Egret	1 50	2 25	278	521	Snowy Plover	75	2 00
199	492	Louisiana Heron	50	1 25	[279]		Mongolian Plover		
200	493	Little Blue Heron	50	1 25	280	522	Wilson's Plover	20	50
201	494	Green Heron	40	75	281	523	Mountain Plover	60	1 00
201a		Frazar's Green Heron			282	511	Surf Bird	1 50	2 50
202	495	Black-crowned Night Heron	1 00	1 50	283	509	Turnstone	30	1 00
203	496	Yellow-crowned Night Heron	1 50	2 50	284	510	Black Turnstone	1 00	1 50
204	582	Whooping Crane	8 00	18 00	[285]	506*	Oyster-catcher	1 25	1 50
205	584	Little Brown Crane	4 00	6 00	286	507	American Oyster-catcher	1 00	1 50
206	583	Sandhill Crane	4 00	6 00	286.1		Frazar's Oyster-catcher		
207	581	Limpkin	2 00	3 50	287	508	Black Oyster-catcher	2 00	3 00
208	569	King Rail	1 00	1 50	[288]	568	Mexican Jacana	75	1 50
209		Belding's Rail			289	480	Bob-white	40	1 00
210	570	California Clapper Rail	1 00	1 50	289a	480a	Florida Bob-white	50	1 00
211	571	Clapper Rail	75	1 00	289b	480b	Texas Bob-white	40	60
211a	571a	Louisiana Clapper Rail	75	1 50	289c		Cuban Bob-white	3 00	4 00
211c		Caribbean Clapper Rail			291		Masked Bob-white	2 50	5 00
211.1		Scott's Rail	1 00	1 50	292	481	Mountain Partridge	1 00	1 50
212	572	Virginia Rail	30	60	292a	481a	Plumed Partridge	1 00	1 50
[213]	573	Spotted Crane	1 25	1 60	292b		San Pedro Partridge		
214	574	Sora	20	40	293	484	Scaled Partridge	75	1 00
215	575	Yellow Rail	2 00	3 50	293a		Chestnut-bellied Scaled Partridge		
216	576	Black Rail	3 50	5 00				50	75
216.1	576a	Parallone Rail			294	482	California Partridge	50	1 00
[217]	577	Corn Crane	75	1 25	244a		Valley Partridge	50	75
218	578	Purple Gallinule	75	1 50	295	483	Gambel's Partridge	1 00	1 50

296	485	Massena Partridge.....	2 50	5 00	358	418	Richardson's Merlin.....	1 75	2 50
297	471	Dusky Grouse.....	1 00	2 00	[358.1]		Merlin.....	1 25	1 75
297a	471a	Sooty Grouse.....	1 00	2 00	359	419	Aplomado Falcon.....	3 50	5 00
297b	471b	Richardson's Grouse.....	3 00	4 00	359.1	422	Kestrel.....	1 00	1 50
298	472	Canada Grouse.....	75	1 25	360	420	423a American Sparrow Hawk.....	25	60
299	472a	Franklin's Grouse.....	1 00	2 50	360a	420	Desert Sparrow Hawk.....	50	75
300	473	Ruffed Grouse.....	75	1 25	360b	420	St. Lucas Sparrow Hawk.....		
30a		Canadian Ruffed Grouse.....	1 00	1 25	[361]	421	Cuban Sparrow Hawk.....		
300b	473a	Gray Ruffed Grouse.....	2 00	3 00	362	423	Audubon's Caracara.....	1 00	1 50
300c	473b	Oregon Ruffed Grouse.....	1 75	2 25	363	424	Guadalupe Caracara.....		
301	474	Willow Ptarmigan.....	1 50	1 75	364	425	American Osprey.....	2 00	3 00
301a		Allen's Ptarmigan.....			365	394	American Barn Owl.....	2 00	3 00
302	475	Rock Ptarmigan.....	2 00	3 00	366	395	American Long-eared Owl.....	50	1 25
302a		Reinhardt's Ptarmigan.....			367	396	Short-eared Owl.....	50	1 00
302b		Nelson's Ptarmigan.....			368	397	Barred Owl.....	50	1 00
302c		Turner's Ptarmigan.....			368a	397a	Florida Barred Owl.....	75	1 50
303		Welch's Ptarmigan.....			369	398	Spotted Owl.....		
304	476	White-tailed Ptarmigan.....	2 00	3 00	370	399	Great Gray Owl.....	7 00	8 00
305	477	Prairie Hen.....	1 00	1 25	[370a]	399a	Lapp Owl.....		
305a	477	Attwater's Prairie Hen.....	2 00	3 00	371	400	Richardson's Owl.....	2 00	3 00
305	477	Heath Hen.....	10 00	15 00	372	401	Saw-whet Owl.....	50	1 00
307	477a	Lesser Prairie Hen.....	1 50	2 25	373	402	Screech Owl.....	50	1 00
308	478	Sharp-tailed Grouse.....	1 00	1 25	373a	402a	Florida Screech Owl.....	1 00	1 25
308a	478a	Columb. Sharp-tailed Grouse.....	1 00	1 50	373b	402b	Texas Screech Owl.....	50	1 00
308b		Prairie Sharp-tailed Grouse.....	2 00	3 00	373c		California Screech Owl.....	1 00	1 50
309	479	Sage Grouse.....	1 50	3 00	373d	402d	Kennicott's Screech Owl.....	1 25	2 00
310	470a	Wild Turkey.....	6 00	8 00	373e	402c	Rocky Mountain Screech Owl.....	50	2 00
310a	470	Mexican Turkey.....	6 00	8 00	373f	403	Mexican Screech Owl.....	1 50	2 00
310b	470a	Florida Wild Turkey.....	10 00	12 00	373g		Aiken's Screech Owl.....		
310c	470	Rio Grande Turkey.....	8 00	10 00	373h	403	MacFarlane's Screech Owl.....		
311	469	Chachalaca.....	50	1 00	374	404	Flammulated Screech Owl.....		
312	456	Band-tailed Pigeon.....	1 25	1 50	375	405	Great Horned Owl.....	2 00	3 00
312a		Viosca's Pigeon.....	2 00	3 00	375a	405a	Western Horned Owl.....	2 00	3 00
313	417	Red-billed Pigeon.....	75	1 25	375b	405b	Arctic Horned Owl.....	6 00	15 00
314	458	White-crowned Pigeon.....	1 50	3 00	375c	405c	Dusky Horned Owl.....	4 00	8 00
315	459	Passenger Pigeon.....	2 00	4 00	376	406	Snowy Owl.....	4 00	6 00
316	460	Mourning Dove.....	20	50	[377]	407a	Hawk Owl.....	2 50	3 00
317	462	Zenaida Dove.....	2 00	3 50	377a	407	American Hawk Owl.....	2 00	3 00
318	463	White-fronted Dove.....	60	1 25	378	408	Burrowing Owl.....	75	1 00
319	461	White-winged Dove.....	50	1 00	378a	408a	Florida Burrowing Owl.....	2 00	4 00
320	465	Ground Dove.....	30	75	379	409	Pygmy Owl.....	1 50	2 50
320a	465	Mexican Ground Dove.....	50	1 00	379a	409	California Pygmy Owl.....	1 50	2 50
321	466	Inca Dove.....	75	1 50	379.1		Hoskin's Pygmy Owl.....	8 00	10 00
[322]	467	Key West Quail-Dove.....	3 00	5 00	380	410	Ferruginous Pygmy Owl.....	1 00	2 00
[322.1]		Ruddy Quail-Dove.....			381	411	Elf Owl.....	2 00	3 00
[323]	468	Blue-headed Quail Dove.....			382	392	Carolina Parquet.....	2 50	5 00
324	453	California Vulture.....			[383]	389	Ani.....	1 50	2 00
325	444	Turkey Vulture.....	2 00	2 50	384	390	Groove-billed Ani.....	40	75
326	415	Black Vulture.....	2 00	2 50	385	385	Road-runner.....	50	1 00
327	424	Swallow-tailed Kite.....	2 50	4 00	386	386	Mangrove Cuckoo.....	1 50	2 50
328	427	White-tailed Kite.....	75	1 50	386a	386	Maynard's Cuckoo.....	2 00	3 00
329	428	Mississippi Kite.....	2 50	3 50	387	387	Yellow-billed Cuckoo.....	30	60
330	429	Everglade Kite.....	4 00	6 00	387a	387	California Cuckoo.....	50	75
331	430	Marsh Hawk.....	40	2 50	388	388	Black-billed Cuckoo.....	30	50
332	432	Sharp-shinned Hawk.....	40	75	[389]	384	Coppery-tailed Trogon.....	2 00	5 00
333	431	Cooper's Hawk.....	40	1 00	390	382	Belted Kingfisher.....	25	50
334	433	American Goshawk.....	1 50	3 50	391	383	Texan Kingfisher.....	75	1 25
334a	433a	Western Goshawk.....	3 00	4 00	392	359	Ivory-billed Woodpecker.....	7 00	15 00
335	444	Harris's Hawk.....	75	1 25	393	360	Hairy Woodpecker.....	20	30
[336]	435	European Buzzard.....	1 50	2 00	393a	360a	Northern Hairy Woodpecker.....	20	30
337	436	Red-tailed Hawk.....	76	1 50	393b	360	Southern Hairy Woodpecker.....	20	30
337a	436a	Krider's Hawk.....			393c	360b	Harris's Woodpecker.....	50	75
337b	436b	Western Red-tail.....	1 00	1 50	393d	360b	Cabanis's Woodpecker.....	40	75
337c	436c	Saint Lucas Red-tail.....			394	361	Downy Woodpecker.....	15	25
337d	438	Harlan's Hawk.....	3 00	5 00	394a	361a	Gairdner's Woodpecker.....	30	45
339	439	Red-shouldered Hawk.....	1 00	1 75	394b		Bachelder's Woodpecker.....	50	1 00
339a		Florida Red-shouldered Hawk.....	1 00	1 75	395	362	Red-cokaded Woodpecker.....	40	50
339b	439a	Red-bellied Hawk.....	2 00	3 00	396	363	Baird's Woodpecker.....	20	50
340	440	Zone-tailed Hawk.....	2 00	4 00	396a	363a	Saint Lucas Woodpecker.....	1 00	1 50
341	441	Sennett's White-tailed Hawk.....	1 00	2 00	397	364	Nuttall's Woodpecker.....	1 00	1 50
342	442	Swainson's Hawk.....	1 00	1 50	398	365	Arizona Woodpecker.....	1 50	2 00
343	443	Broad-winged Hawk.....	1 00	1 50	399	366	White-headed Woodpecker.....	1 00	1 50
[344]		Short-tailed Hawk.....			400	367	Arctic Three-toed Woodpecker.....	50	75
345	444	Mexican Black Hawk.....	4 00	5 00	401	368	Am. Three-toed Woodpecker.....	2 00	2 50
346	445	Mexican Goshawk.....	2 00	3 00	401a		Alaskan Three-toed Woodpecker.....		
[347]		Rough-legged Hawk.....	1 50	2 00	401b	368a	Alpine Three-toed Woodpecker.....	50	2 00
347a	447	Amer. Rough legged Hawk.....	1 00	2 00	402	369	Yellow-bellied Sapsucker.....	20	40
348	448	Ferruginous Rough leg.....	2 00	3 00	402a	369a	Red-naped Sapsucker.....	50	75
349	449	Golden Eagle.....	6 00	10 00	403	369b	Red-breasted Sapsucker.....	75	1 00
[350]	450	Harpy Eagle.....	6 00	12 00	404	370	Willamson's Sapsucker.....	\$1 00	\$1 50
[351]	452	Gray Sea Eagle.....	6 00	8 00	405	371	Pileated Woodpecker.....	40	1 00
352	451	Bald Eagle.....	3 00	8 00	406	375	Red-headed Woodpecker.....	25	40
353	412	White Gyrfalcon.....	10 00	15 00	407	377	California Woodpecker.....	35	50
354	412a	Gray Gyrfalcon.....	10 00	15 00	407a	377a	Narrow-fronted Woodpecker.....	80	1 25
354a	412b	Gyrfalcon.....	10 00	15 00	408	376	Lewis's Woodpecker.....	75	1 00
354b	412c	Black Gyrfalcon.....	10 00	15 00	409	372	Red-bellied Woodpecker.....	25	40
355	413	Prairie Falcon.....	1 00	2 00	410	373	Golden-fronted Woodpecker.....	25	40
356	414	Duck Hawk.....	1 00	2 00	411	374	Gila Woodpecker.....	75	1 00
356a	414a	Peale's Falcon.....			412	378	Flicker.....	25	35
357	417	Pigeon Hawk.....	40	1 00	413	378b	Red-shafted Flicker.....	40	50
357a	417a	Black Merlin.....	2 00	3 50	413a		Northwestern Flicker.....	45	60

414	379	Gilded Flicker	90	150	477a	Florida Blue Jay	25	35
415	380	Guadalupe Flicker			478	290 Steller's Jay	125	175
416	353	Chuck-will's-widow	150	200	478a	290a Blue-fronted Jay	40	60
417	354	Whip-poor-will	60	100	478b	290c Long-crested Jay	40	60
417a		Stephen's Whip-poor-will	300	400	478c	290b Black-headed Jay	40	60
418	355	Poor-will	150	200	479	291 Florida Jay	35	50
418a	355	Frosted Poor-will	150	200	480	292 Woodhouse's Jay	100	150
418b	355	Dusky Poor-will	150	200	481	293 California Jay	35	50
419	356	Merrill's Paraque	100	150	481a	293 Xantus's Jay		
420	357	Nighthawk	30	50	481b	Belding's Jay		
420a	357a	Western Nighthawk	30	50	481.1	Santa Cruz Jay		
420c	357b	Florida Nighthawk	90	125	482	295 Arizona Jay	75	100
421	358	Texan Nighthawk	30	50	83	296 Green Jay	40	60
422	350	Black Swift	300	450	484	297 Canada Jay	40	60
423	351	Chimney Swift	20	50	481a	297a Rocky Mountain Jay	75	100
424	352	Vaux's Swift	150	200	481b	297b Alaskan Jay	100	200
425	349	White-throated Swift	150	250	481c	Labrador Jay	100	150
425	349	White-throated Swift	175	300	485	298 Oregon Jay	125	200
425	349	White-throated Swift	175	300	486	290 American Raven	200	300
428	335	Ruby-throated Hummingbird	50	100	486a	280 Northern Raven	200	300
429	336	Black-chinned Hummingbird	75	100	487	281 White-necked Raven	200	300
429.1		Violet-throated Hummingbird			488	282 American Crow	50	75
430	337	Costa's Hummingbird	50	100	488a	282a Florida Crow	50	100
431	338	Anna's Hummingbird	50	75	489	282b Northwest Crow	100	125
431.1		Flores's Hummingbird			490	283 Fish Crow	50	100
432	339	Broad-tailed Hummingbird	75	125	491	284 Clarke's Nutcracker	100	150
433	340	Rufous Hummingbird	50	75	492	285 Pinon Jay	75	100
434	341	Allen's Hummingbird	50	75	493	279 Starling	35	50
436	343	Calliope Hummingbird	75	125	494	257 Bobolink	15	30
437	344	Lucifer Hummingbird	100	150	494a	Western Bobolink	30	50
438	345	Reiffer's Hummingbird	100	150	495	258 Cowbird	15	25
439	346	Buff-bellied Hummingbird	50	100	495a	258a Dwarf Cowbird	20	35
440	347	Xantus's Hummingbird	200	300	496	259 Red-eyed Cowbird	40	60
441	348	Broad-billed Hummingbird	100	150	497	260 Yellow-headed Blackbird	25	40
441.1		Xantus's Becard			498	271 Red-winged Blackbird	15	25
442	302	Fork-tailed Flycatcher	100	150	498a	261 Sonoran Red-wing	50	100
443	301	Scissor-tailed Flycatcher	40	60	498b	261 Bahaman Red-wing	75	100
444	304	Kingbird	15	30	499	261a Bicolored Blackbird	30	45
445	303	Gray Kingbird	40	50	500	262 Tricolored Blackbird	30	50
446	305	Conch's Kingbird	50	75	501	263 Meadowlark	30	50
447	306	Arkansas Kingbird	30	45	501a	263a Mexican Meadowlark	50	75
448	307	Cassin's Kingbird	35	50	501b	264 Western Meadowlark	25	40
449	308	Derby's Flycatcher	175	300	[502]	265 Troupial	100	200
[450]	309	Girand's Flycatcher	100	125	503	266 Audubon's Oriole	40	60
451	310	Sulphur-bellied Flycatcher	175	300	504	268 Scott's Oriole	100	150
452	312	Crested Flycatcher	15	30	505	269 Hooded Oriole	30	50
453	311	Mexican Crested Flycatcher	15	30	505a	Arizona Hooded Oriole	40	60
453a		Arizona Crested Flycatcher	100	125	506	270 Orchard Oriole	20	30
454	313	Ash-throated Flycatcher	25	40	507	271 Baltimore Oriole	20	50
454a	313	Nutting's Flycatcher			508	272 Bullock's Oriole	20	50
[455]	314	Lawrence's Flycatcher	150	200	509	273 Rusty Blackbird	20	40
455a		Olivaceous Flycatcher	100	150	510	274 Brewer's Blackbird	20	40
456	315	Phoebe	15	25	511	278 Purple Grackle	20	40
457	316	Slack's Phoebe	25	35	511a	278a Florida Grackle	20	40
458	317	Black Phoebe	30	50	511b	278b Bronzed Grackle	20	40
459	318	Olive-sided Flycatcher	50	70	512	275 Great-tailed Grackle	40	60
460	319	Cone's Flycatcher	100	200	513	277 Boat-tailed Grackle	30	50
461	320	Wood Pewee	15	25	514	165 Evening Grosbeak	60	100
462	321	Western Wood Pewee	20	30	514a	165 Western Evening Grosbeak	100	150
462a		Large-billed Wood Pewee	25	35	515	165 Pine Grosbeak	20	75
463	322	Yellow-bellied Flycatcher	25	35	[516]	167 Cassin's Bullfinch		
464	323	Western Flycatcher	25	35	517	168 Purple Finch	15	25
464.1		St. Lucas Flycatcher	200	400	517a	168a California Purple Finch	25	40
465	324	Acadian Flycatcher	25	35	518	169 Cassin's Purple Finch	25	40
466	325	Little Flycatcher	75	125	519	170 House Finch	25	40
466a	325a	Traill's Flycatcher	25	35	519b	170a St. Lucas House Finch	25	40
467	326	Least Flycatcher	15	25	520	171 Guadalupe House Finch		
468	327	Hammond's Flycatcher	50	75	521	172 American Crossbill	15	35
469	328	Wright's Flycatcher	30	40	522	173 Mexican Crossbill	50	75
469.1		Gray Flycatcher			523	173a White-winged Crossbill	25	60
[47]	329	Fulvous Flycatcher			523	174 Aleutian Leucosticte	125	200
470a	329a	Buff-breasted Flycatcher	175	250	524	175 Gray-crowned Leucosticte	75	100
471	330	Vermilion Flycatcher	40	60	524a	175a Hepburn's Leucosticte	75	125
472	331	Beardless Flycatcher	200	300	525	176 Black Leucosticte	350	500
472a		Ridgway's Flycatcher	200	300	526	177 Brown-capped Leucosticte	75	100
[473]	299	Skylark	50	60	527	178 Greenland Redpoll	175	250
474	300	Horned Lark	25	40	527a	178a Hoary Redpoll	175	250
474a	300a	Pallid Horned Lark	30	50	528	179 Redpoll	15	25
474b		Prairie Horned Lark	30	50	528a	179a Hobbell's Redpoll	125	200
474c		Desert Horned Lark	25	40	528b	179a Greater Redpoll	75	100
474d		Texan Horned Lark	30	50	529	181 American Goldfinch	10	25
474e	300b	Mexican Horned Lark	30	50	529a	181 Western Goldfinch		
474f		Ruddy Horned Lark	30	50	530	182 Arkansas Goldfinch	25	35
474g		Streaked Horned Lark	30	50	530a	182a Arizona Goldfinch	30	40
474h		Scorched Horned Lark			530b	182b Mexican Goldfinch	100	150
474i		Dusky Horned Lark			531	183 Lawrence's Goldfinch	40	50
474j		Sonoran Horned Lark			[532]	184 Black-headed Goldfinch	75	125
475	286	American Magpie	40	75	533	185 Pine Siskin	15	25
476	287	Yellow-billed Magpie	50	100	534	186 Snowflake	25	35
477	289	Blue Jay	20	30	534a	186 Prybilof Snowflake	50	75
					535	McKay's Snowflake	800	1000

536	187	Lapland Longspur	20	50	585c 235c	Slate-colored Sparrow	1 00	2 00
537	188	Sin th's Longspur	30	50	586 236	Texas Sparrow	30	50
538	189	Chestnut collared Longspur	20	40	587 237	Towhee	15	25
539	190	McCown's Longspur	25	40	587a 237a	White-eyed Towhee	30	40
540	197	Vesper Sparrow	15	25	588 v38	Arctic Towhee	30	40
540a 197a		Western Vesper Sparrow	25	30	588a 238a	Spurred Towhee	30	40
540b 197a		Oregon Vesper Sparrow	25	30	588b 238b	Oregon Towhee	30	40
541	192	Ipswich Sparrow	25	50	589 238c	Gnadalupe Towhee	30	40
541' 193		Sandwich Sparrow	1 00	2 00	5 0 239	Green-tailed Towhee	30	40
542a 193a		Savanna Sparrow	15	25	591 240	Canon Towhee	30	40
542b 193b		Western Savanna Sparrow	20	30	591a 240a	St. Lucas Towhee	1 00	2 00
542c 194		Bryant's Marsh Sparrow	50	1 00	591b 240b	Californian Towhee	30	40
543	194	Belding's Marsh Sparrow	1 00	1 50	591' 241	Abert's Towhee	75	1 25
544	196	Large-billed Sparrow	1 50	2 50	593 242	Cardinal	25	35
544a 195		St. Lucas Sparrow	1 00	1 50	593a 242a	Arizona Cardinal	40	65
545	191	Baird's Sparrow	75	1 00	593b 242b	St. Lucas Cardinal	60	1 00
546	198	Grasshopper Sparrow	20	30	593c 242	Gray-tailed Cardinal	50	75
546a 198a		West. Grasshopper Sparrow	20	35	594 243	Texas Cardinal	40	50
547	199	Henslow's Sparrow	60	75	594a 243	Arizona Pyrrhuloxia	40	50
547a 199		West. Henslow's Sparrow	50	75	594b 243	St. Lucas Pyrrhuloxia	60	1 00
548	200	Lecote's Sparrow	40	60	595 244	Rose breasted Grosbeak	20	45
549	201	Sharp-tailed Sparrow	25	35	596 245	Black-headed Grosbeak	50	50
549a 201a		Neelson's Sparrow	40	60	597 246	Blue Grosbeak	40	60
549b 201		Acadian Sharp-tailed Sparrow	25	35	597a 246	Western Blue Grosbeak	40	60
550	202	Seaside Sparrow	30	40	598 248	Indigo Bunting	20	30
550a 202		Scott's Seaside Sparrow	1 00	1 25	599 249	Lazuli Bunting	30	50
550b 202		Texas Seaside Sparrow	1 50	2 00	600 250	Varied Bunting	75	1 50
551	203	Dusky Seaside Sparrow	1 00	1 25	600a 250	Beautiful Bunting	2 00	3 00
552	204	Lark Sparrow	25	40	601 251	Painted Bunting	40	60
552a 204a		Western Lark Sparrow	20	30	602 252	Sharpe's Seed-eater	40	60
553	205	Harris's Sparrow	40	50	603 2 3	Grassquit	75	1 00
554	206	White-crowned Sparrow	20	35	[603 1]	Melodious Grassquit	15	30
554b 207a		Intermediate Sparrow	20	35	601 251	Pickrel	25	40
554b 207		Gambel's Sparrow	20	35	605 255	Lark Bunting	1 00	1 25
557	208	Golden-crowned Sparrow	30	50	606 180	Blue-headed Euphonia	25	75
558	209	White-throated Sparrow	15	25	607 1 2	Louisiana Tanager	20	40
559	210	Tree Sparrow	15	25	[607.1]	Gray's Tanager	20	40
559a 210		Western Tree Sparrow	25	35	608 181	Scarlet Tanager	20	40
560	211	Chipping Sparrow	15	25	609 163	Hepatic Tanager	1 00	1 50
560a 211a		Western Chipping Sparrow	20	30	610 164	Summer Tanager	40	60
561	212	Clay-colored Sparrow	20	30	610a 161a	Cooper's Tanager	1 00	1 50
562	213	Brewer's Sparrow	30	40	611 152	Purple Martin	20	40
563	214	Field Sparrow	15	25	611a 152	Western Martin	30	60
563a		Western Field Sparrow	50	75	611.1 152a	Cuban Martin	75	1 25
564		Worthern Sparrow	1 25	2 05	612 153	Cliff Swallow	15	30
565	215	Black-chinned Sparrow	1 00	2 00	[612.1]	Cuban Cliff Swallow	15	30
5 6 216		White-winged Junco	50	75	613 154	Barn Swallow	15	30
567	217	Slate-colored Junco	15	25	614 155	Tree Swallow	15	30
567a 218		Oregon Junco	30	50	615 156	Violet-Green Swallow	40	60
567b 218		Shufeldt's Junco			[615.1]	Bahaman Swallow	15	25
567c 218		Thurber's Junco			616 157	Bank Swallow	15	25
567d		Point Pinos Junco			617 158	Rough-winged Swallow	30	50
567e 217		Carolina Junco	50	1 00	618 150	Bohemian Waxwing	75	1 25
568 219		Pink-sided Junco	25	50	619 151	Cedar Waxwing	15	25
568.1		Ridgway's Junco			620 26	Phainopepla	75	90
569 220		Gray-headed Junco	40	60	621 148	Northern Shrike	30	50
570 222		Arizona Junco	40	60	622 149	Loggerhead Shrike	25	40
570a 221		Red-backed Junco	40	60	622a 149a	White-rumped Shrike	20	30
571		Baird's Junco	2 00	3 00	622b 149a	California Shrike	20	30
571.1		Townsend's Junco			623 1 7	Black-whiskered Vireo	50	75
572 223		Gnadalupe Junco			624 135	Red-eyed Vireo	15	25
573 224		Black throated Sparrow	20	50	625 136	Yellow-green Vireo	75	1 25
574 225		Bell's Sparrow	35	50	626 138	Philadelphia Vireo	40	60
574a 225a		Sage Sparrow	75	1 00	627 139	139a Warbling Vireo	15	25
574b		Gray Sage Sparrow			628 140	Yellow-throated Vireo	15	30
575 226		Pine-woods Sparrow	75	1 00	629 141	Blue-headed Vireo	20	35
575a 226a		Bachman's Sparrow	75	1 00	629a 141a	Cassin's Vireo	40	60
576 227		Arizona Sparrow	75	1 00	629b 141b	Plumbeous Vireo	30	50
577		Mexican Sparrow	1 00	1 50	629c 141	Mountain Solitary Vireo	30	50
578 228		Cassin's Sparrow	50	75	630 142	Black-capped Vireo	75	1 00
579 229		Rufous-winged Sparrow	75	1 00	631 143	White-eyed Vireo	15	30
580 230		Rufous-crowned Sparrow	50	75	631a	Key West Vireo	1 00	1 50
58 a 230a		Boucard's Sparrow	75	1 00	632 144	Hutton's Vireo	50	60
580b		Rock Sparrow	75	1 00	632a	Stephen's Vireo	50	75
581 231		Song Sparrow	15	25	633 145	Bell's Vireo	35	50
581a 231a		Desert Song Sparrow	25	35	633a 146	Least Vireo	75	1 00
581b 231b		Mountain Song Sparrow	25	35	634 147	Gray Vireo	75	1 00
581c 231c		Heermann's Song Sparrow	25	35	635 159	Bahama Honey Creeper	1 00	2 00
581d 231d		Samuel's Song Sparrow	20	30	636 74 74a	Black and White Warbler	20	35
581e 231e		Emuel's Song Sparrow	40	50	637 75	Prothonotary Warbler	50	75
581f 231e		Sooty Song Sparrow	60	1 00	638 76	Swainson's Warbler	1 50	2 50
581g		Brown's Song Sparrow			639 77	Worm-eating Warbler	60	75
581h		Santa Barbara Song Sparr.			640 78	Bachman's Warbler	2 00	3 00
581i		San Clemente Song Sparr.			641 79	Blue-winged Warbler	60	75
582 232		Alutian Song Sparrow	3 00	5 00	642 81	Golden-winged Warbler	40	60
583 234		Lincoln's Sparrow	20	30	643 83	Lucy's Warbler	1 25	1 50
583a 234		Forbush's Sparrow			644 84	Virginia's Warbler	1 75	2 50
584 233		Swamp Sparrow	20	30	645 85	Nashville Warbler	20	30
585 235		Fox Sparrow	15	25	645a 85	Calav-ras Warbler	20	35
585a 235a		Townsend's Sparrow	25	40	646 86	Orange-crowned Warbler	50	75
585b 235b		Thick-billed Sparrow	35	50	646a 86a	Lutescent Warbler	40	60

646b	Dusky Warbler.....			29	30
647	87 Tennessee Warbler.....	50	1 00	29	30
648	88 Parula Warbler.....	15	25	29	30
649	89a Sennett's Warbler.....	50	75	29	30
650	90 Cape May Warbler.....	50	1 25	29	30
651	92 Olive Warbler.....	1 75	2 50	29	30
652	93 Yellow Warbler.....	20	30	29	30
652a	93 Sonora Yellow Warbler.....	20	50	29	30
653	Mangrove Warbler.....	5 00	8 00	29	30
654	94 Black-throated Blue Warbler.....	20	35	29	30
655	95 Myrtle Warbler.....	10	25	29	30
656	96 Audubon's Warbler.....	30	50	29	30
657	97 Magnolia Warbler.....	20	30	29	30
658	98 Cerulean Warbler.....	50	75	29	30
659	99 Chestnut-sided Warbler.....	10	25	29	30
660	100 Bay-breasted Warbler.....	40	75	29	30
661	101 Black-poll Warbler.....	15	25	29	30
662	102 Blackburnian Warbler.....	20	50	29	30
663	103 Yellow-throated Warbler.....	40	60	29	30
663a	103a Sycamore Warbler.....	50	65	29	30
664	104 Grace's Warbler.....	2 00	3 00	29	30
665	105 Black-throated Gray Warbler.....	75	1 00	29	30
666	106 Golden-cheeked Warbler.....	4 00	6 00	29	30
667	107 Blk-throated Green Warbler.....	20	30	29	30
668	108 Townsend's Warbler.....	1 50	2 50	29	30
669	109 Hermit Warbler.....	1 50	2 50	29	30
670	110 Kirtland's Warbler.....	4 00	6 00	29	30
671	111 Pine Warbler.....	15	25	29	30
672	113 Palm Warbler.....	30	50	29	30
672a	113a Yellow Palm Warbler.....	15	25	29	30
673	114 Prairie Warbler.....	20	40	29	30
674	115 Ovenbird.....	15	25	29	30
675	116 Water-Thrush.....	20	30	29	30
675a	116a Grinnell's Water-Thrush.....	50	75	29	30
676	117 Louisiana Water-Thrush.....	45	60	29	30
677	118 Kentucky Warbler.....	50	1 00	29	30
678	119 Connecticut Warbler.....	50	1 00	29	30
679	120 Mourning Warbler.....	50	75	29	30
680	121 Macgillivray's Warbler.....	50	75	29	30
681	122 Maryland Yellow-throat.....	15	25	29	30
681a	122a Western Yellow-throat.....	40	50	29	30
681b	122b Florida Yellow-throat.....	2 50	4 00	29	30
682	Belding's Yellow-throat.....	2 50	4 00	29	30
682.1	Mirador Yellow-throat.....			29	30
683	123 Yellow-breasted Chat.....	30	40	29	30
683a	123a Long-tailed Chat.....	30	40	29	30
684	124 Hooded Warbler.....	40	60	29	30
685	125 Wilson's Warbler.....	30	50	29	30
685a	125a Pileolated Warbler.....	30	50	29	30
686	127 Canadian Warbler.....	20	40	29	30
687	128 American Redstart.....	15	25	29	30
688	129 Painted Redstart.....	1 50	2 00	29	30
[689]	130 Red-bellied Redstart.....	1 50	2 00	29	30
690	131 Red-faced Warbler.....	1 50	2 00	29	30
[691]	132 Red Warbler.....	2 00	3 00	29	30
[692]	133 Brasher's Warbler.....	2 00	3 00	29	30
[693]	134 Bell's Warbler.....	2 00	3 00	29	30
[694]	69 White Wagtail.....	50	65	29	30
[695]	Swinhoe's Wagtail.....			29	30
696	70 Siberian Yellow Wagtail.....	60	75	29	30
697	71 American Pipit.....	20	30	29	30
[698]	72 Meadow Pipit.....	50	60	29	30
[699]	Red-throated Pipit.....	1 50	2 00	29	30
700	73 Sprague's Pipit.....	1 00	1 50	29	30
701	19 American Dipper.....	50	75	29	30
702	10 Sage Thrasher.....	40	50	29	30
703	11 Mockingbird.....	20	35	29	30
704	12 Catbird.....	15	25	29	30
705	13 Brown Thrasher.....	20	30	29	30
706	13a Sennett's Thrasher.....	20	40	29	30
707	15 Curve-billed Thrasher.....	20	40	29	30
707a	15a Palmer's Thrasher.....	1 50	2 00	29	30
708	14a Bendire's Thrasher.....	1 50	2 00	29	30
709	14 St. Lucas Thrasher.....	1 00	1 50	29	30
710	16 California Thrasher.....	60	75	29	30
711	16a Leconte's Thrasher.....	1 50	2 00	29	30
712	17 Crissal Thrasher.....	1 00	1 50	29	30
713	56 Cactus Wren.....	40	50	29	30
714	57 St. Lucas Cactus Wren.....	1 25	2 00	29	30
715	58 Rock Wren.....	30	40	29	30
716	58a Guadalupe Rock Wren.....			29	30
[717]	59 White-throated Wren.....	1 00	1 25	29	30
717a	59a Canon Wren.....	1 00	1 25	29	30
717b	59b Dotted Canon Wren.....	1 00	1 25	29	30
718	60 Carolina Wren.....	30	40	29	30
718a	60b Florida Wren.....	75	1 00	29	30
718b	60 Lomita Wren.....			29	30
719	61 Bewick's Wren.....	60	75	29	30
719a	61a Vigor's Wren.....	45	55	29	30
719b	61b Baird's Wren.....	45	55	29	30
720	62 Guadalupe Wren.....			29	30
721	63 House Wren.....			29	30
721a	63a Parkman's Wren.....			29	30
721b	63b Western House Wren.....			29	30
722	65 Winter Wren.....			29	30
722a	65a Western Winter Wren.....			29	30
723	66 Alaskan Wren.....	2 00	3 00	29	30
724	68 Short-billed Marsh Wren.....	60	75	29	30
725	67 Long-billed Marsh Wren.....	20	25	29	30
725a	67a Tule Wren.....	30	40	29	30
725c	Worthington's Marsh Wren.....			29	30
725.1	Marian's Marsh Wren.....	30	40	29	30
726	51 Brown Creeper.....	20	30	29	30
726a	52a Mexican Creeper.....	50	75	29	30
726b	55 Rocky Mountain Creeper.....	30	45	29	30
726c	55 California Creeper.....	30	45	29	30
727	51 White-breasted Nuthatch.....	20	30	29	30
727a	51a Slender-billed Nuthatch.....	30	40	29	30
727b	51a White-b'st'd Nuthatch.....			29	30
728	52 Red-breasted Nuthatch.....	25	35	29	30
729	53 Brown-headed Nuthatch.....	25	35	29	30
730	54 Pygmy Nuthatch.....	25	35	29	30
730a	54 White-naped Nuthatch.....			29	30
731	36 Tufted Titmouse.....	20	35	29	30
731a	36a Texan Tufted Titmouse.....	20	35	29	30
732	37 Black-crested Titmouse.....	20	40	29	30
733	38 Plain Titmouse.....	30	50	29	30
733a	38 Gray Titmouse.....	60	75	29	30
734	39 Ashy Titmouse.....	75	1 00	29	30
734.1	39 Bridled Titmouse.....	60	75	29	30
735	41 Chickadee.....	15	25	29	30
735a	41a Long-tailed Chickadee.....	40	50	29	30
735b	41b Oregon Chickadee.....	50	65	29	30
736	42 Carolina Chickadee.....	25	35	29	30
736a	42 Plumbeous Chickadee.....	75	1 00	29	30
[737]	43 Mexican Chickadee.....	1 00	2 00	29	30
738	40 Mountain Chickadee.....	60	75	29	30
739	44 Siberian Chickadee.....	4 00	5 00	29	30
740	45 Hudsonian Chickadee.....	30	40	29	30
740a	Kowak Chickadee.....	60	80	29	30
740b	Columbian Chickadee.....			29	30
741	46 Chestnut-backed Chickadee.....	75	1 00	29	30
741a	46a Californian Chickadee.....	50	65	29	30
742	35 Wren-Tit.....	40	60	29	30
742a	35a Pallid Wren-Tit.....	1 00	1 25	29	30
743	47 Bush-Tit.....	25	35	29	30
743a	47 Californian Bush-Tit.....	25	35	29	30
743b	47a Grinda's Bush-Tit.....	1 00	1 50	29	30
744	48 Lead-colored Bush-Tit.....	25	30	29	30
744.1	48a Santa Rita Bush-Tit.....	1 00	1 50	29	30
745	49 Lloyd's Bush-Tit.....	80	1 25	29	30
746	50 Verdun.....	30	50	29	30
747	34 Kennicott's Willow Warbler.....	3 00	5 00	29	30
748	33 Golden-crowned Kinglet.....	20	30	29	30
748a	33a West. Gold-crowned Kinglet.....	25	40	29	30
749	30 Ruby-crowned Kinglet.....	35	45	29	30
750	31 Dusky Kinglet.....	50	75	29	30
751	27 Blue-gray Gnatcatcher.....	20	30	29	30
751a	27a Western Gnatcatcher.....			29	30
752	28 Plumbeous Gnatcatcher.....	40	65	29	30
753	29 Black-tailed Gnatcatcher.....	50	75	29	30
754	25 Townsend's Solitaire.....	40	50	29	30
755	1 Wood Thrush.....	25	40	29	30
756	2 Wilson's Thrush.....	20	30	29	30
756a	2a Willow Thrush.....	50	75	29	30
757	3 Gray-cheeked Thrush.....	20	35	29	30
757a	3a Bicknell's Thrush.....	50	75	29	30
758	4 Russet-backed Thrush.....	35	45	29	30
758a	4a Olive-backed Thrush.....	20	30	29	30
759	5 Dwarf Hermit Thrush.....	30	40	29	30
759a	5a Audubon's Hermit Thrush.....	30	40	29	30
759b	5b Hermit Thrush.....	20	35	29	30
[760]	6 Red-winged Thrush.....	60	75	29	30
761	7 American Robin.....	20	30	29	30
761a	7a Western Robin.....	30	50	29	30
762	8 St. Lucas Robin.....	3 00	4 00	29	30
763	9 Varied Thrush.....	60	75	29	30
[764]	20 Red-spotted Bluethroat.....	1 00	1 25	29	30
765	21 Wheatar.....	40	50	29	30
766	22 Bluebird.....	10	25	29	30
766a	Azure Bluebird.....	1 00	2 00	29	30
767	23 Western Bluebird.....	25	30	29	30
768	24 Mountain Bluebird.....	30	50	29	30
	English Pheasant.....	1 00	2 50	29	30
	Ring Pheasant.....	3 00	5 00	29	30
	Green Pheasant.....	1 00	2 00	29	30
	Silver Pheasant.....	2 00	5 00	29	30
	Golden Pheasant.....	5 00	7 00	29	30
	Black Grouse.....	2 00	3 00	29	30
	European Goldfinch.....	40	75	29	30
	English Sparrow.....	15	25	29	30
	European Tree Sparrow.....	35	60	29	30

INTRODUCED SPECIES.



THE OÖLOGIST.

Monthly. 50c. per Year.

VOL. XI. NO. 7.

ALBION, N. Y., JULY, 1894.

WHOLE No. 105

Wants, Exchanges, and For Sales.

Brief special announcements, "Wants," "Exchanges" "For Sales," inserted in this department for 50c per 35 words. Notices over 35 words, charged at the rate of one cent per each additional word. No notice inserted for less than 50c. Terms, cash with order.

"DEALERS" can use these columns at *Regular Advertising rates, only*.

Strictly First-class specimens will be accepted in payment at one-half list rates.

Exchange Cards and Coupons (subscription) will be accepted for "Wants" and "Exchanges" *only* and according to conditions stated thereon.

I HAVE many articles to trade for photo supplies, and camera, etc. JAMES ODELL, JR., Austin, Texas.

FOR EXCHANGE.—Eggs in sets including 101, 207, 293a, 311, 313, 318, 319, 320a, 335, 362, 380, 387, 419, 421, 439, 410, etc., etc. Send full list. Raptors especially desired. THOMAS H. JACKSON, West Chester, Penn.

TO EXCHANGE.—I have a snare drum to exchange for taxidermist's instruments, or any thing useful. Letters answered. MITCHILL CHANEY, Pricetown, Highland Co., Ohio.

FOR SALE.—A fine solid silver open face watch nearly new, cost \$18. Will sell for \$13 cash or books equal value. Make offer. W. F. WEBB, Gaines, N. Y.

I HAVE mounted birds, skins and four volumes of the Oölogist to exchange for same or books on Ornithology. C. W. CONREY, Box 1, Knoxville, Iowa.

TO EXCHANGE.—About 90 first-class singles for other eggs in sets. Terms easy. Correspondence solicited. C. T. MUELLER, 406 Park St., Milwaukee, Wis.

EXCHANGE NOTICE.—Those wishing to exchange first-class sets with data for same write at once, I also offer some Buff Cochins Bantams to ex. for sets. ARTHUR V. CLIFTON, 232 S. Lumpkin St., Athens, Ga.

A RARE Sheet of Stamps. What am I offered for a sheet containing 100 ten cent (pale blue) Confederate stamps of the general issue of 1863. I want either cash, photographic supplies, watch or Ruby lantern. *No specimens*. JAMES ODELL, JR., Austin, Texas.

TO EXCHANGE.—Scroll saw outfit, 1 doz. Brewster's patent rein holders (fine sellers), books of all kinds, by standard authors, 1 doz. Family Rights for making "Eureka Labor Saving Laundry Soap." Formulas for making the noted mineral waters and Van Stan's Stratenia, for corals, minerals and Indian relics. FRANK M. HEWLETT, Dresden, Yates Co., N. Y.

HAWKS and Owls Eggs in sets for cash, or exchange for eggs or skins. Lists from advanced collectors solicited. My list sent to all. A. W. CANNED, 72 Wabash Ave., Chicago, Ill.

FOR EXCHANGE.—1 Scoville Camera 4½x 5½ complete, with tripod. For 4x5 Hand Camera or breech loading shot gun. C. K. PHILP, Port Hope, Ont.

TO EXCHANGE.—A fine collection of two hundred and fifty postage stamps, valued at from one to ten cents each. H. C. ALLEN, 159 Pennsylvania Ave., Newark, N. J.

UNUSED Confederate Stamps for back numbers of journals, papers and also books on photography. JAMES ODELL, JR., Austin, Texas.

RARE EGGS.—I have secured the collection of eggs from a large museum recently sold out at auction. A part of these I will sell, can offer Eagles, Owls, Hawks, Cranes, Storks and hundreds more very cheap. Send stamp for list. A. E. LITTLE, 235 Market St., San Francisco, Cal.

WHAT can you offer for an "American Challenge Bicycle? Fifty inch gear. Direct spokes. Original value \$90. ROBERT MAXWELL, Lock Box 1961, South Bend, Ind.

TO EXCHANGE.—Finely prepared sets with complete data. Many with nests. Reliable collectors please send lists. J. WARREN JACOBS, Waynesburg, Pa.

WANTED.—W. Raine's, Bird Nesting in North-west Canada. Will give good exchange in rare eggs. CHESTER IRVINE, Georgetown, Texas.

\$10 Worth of first-class desirable sets 428, 494, 727, etc., for Cones' Key, Ridgway's Manual, Cabinet or supplies. MILLARD VAN WAGNER, Gretna, N. Y.

TO EXCHANGE.—First-class eggs in sets or singles, send list and receive mine, also \$4.50 Quackenbush air rifle in good condition, for best offer. M. H. GREENE, Locust, N. J.

TO EXCHANGE.—For complete volume of Ornithologist and Oologist, or Auk: Birds Michigan; Birds Minnesota; Mammals Minnesota. Write for list. WM. H. FISHER, 14 W. North Ave., Baltimore, Md.

FOR SALE.—A collection of first-class skins, mostly made by Worthington, and eggs with data, singly or entire. Send for list. H. L. BALLOWE, Diamond, La.

BARGAINS in sets with full data. Black Vulture $\frac{1}{2}$, 40c. per egg; Painted Bunting $\frac{1}{4}$, 6c. per egg; Orchard Oriole 1-5, 3c. per egg. Enclose 5c. for postage for orders under 50c. HERBERT STERZING, Austin, Texas.

FOR SALE.—Registered Berkshire pigs \$30 per pair not akin. Will exchange a pair for best offer high value Columbian stamps. GEO. STAPLIN, JR., Mannsville, Jeff. Co., N. Y.

TO EXCHANGE.—Geological Survey of Ohio Vol. IV: Zoology, containing description of Birds of Ohio for best offer of eggs in sets. W. C. MILLS, Mt. Vernon, Ohio.

TO EXCHANGE.—First class single eggs for a good six or eight in. Caliper, Davie's Nests and Eggs, or other standard Ornithological works, or showy shells. Send for lists. O. A. PFEIFFER, San Antonio, Texas.

TO EXCHANGE.—For every 25 cent piece coined before 1874, I will give four different Foreign coins, or two United States Liberty cents, dated prior to 1815. O. J. SWANDER, Kenton, Hardin Co., Ohio.

TO EXCHANGE.—Sets of Black-chinned Hummingbird, with data and nest, for first-class sets from Eastern States. Address, C. A. THOMAS, North Pasadena, Calif.

SAY!—For 30 days I will print 100 letter-heads and 100 envelopes for only 75 cents. Send stamp for samples. Order quick. W. W. LOOMIS, Clermont, Iowa.

FIRST-CLASS eggs and novels to exchange for eggs, with data. W. A. STRONG, Tulare, Cal.

FOR FIVE DOLLARS worth sets, standard data, or small bore single gun, will give 45 numbers "Popular Science," over 7000 pages natural history, chemistry, etc. OTTO GRADY, Ludlow, Ky.

EXCHANGE.—New double barrel shot gun, all improvements, 12 gauge, for first-class eggs in sets. Correspondence solicited. GEORGE WALL, Silver Creek, N.Y.

PARTIES having sets or skins of Starling Thrush and Cuckoo families, to sell or exchange, send list with prices. Correspondence invited. W. E. MULLIKEN, 527 So. Laf. St., Grand Rapids, Mich.

I WILL GIVE \$12 worth of sets for a good second-hand Smith & Wesson Double Action 32 cal. Revolver. Parties having same for exchange write me for list of eggs. Must be in good order. Write immediately. R. N. WILLIAMS, JR., Tallahassee, Fla.

WANTED! WANTED!! WANTED!!! Everybody to send a stamp for our price list and circular of our prize winners. Buff and Brown Leghorn Chickens, Rabbits and Guinea Pigs of all varieties, also 1 Pug dog 11 months old. He is a beauty. We will sell cheap. Satisfaction guaranteed. Address, REICH BROS., Salem, N. C.

SETS AND SINGLES of Nos. 191, 218, 373, 751; skins of 218, 203, 513; set of minerals, for skins, ornithological books. H. L. BALLOWE, Diamond, La.

TO EXCHANGE.—For best offer of first-class eggs in sets, by August 1, a pair of live Great Horned Owls in full plumage. E. B. SCHRAGE, Pontiac, Mich.

GRANT'S MEMOIRS. Cyclopedia Natural History and other new books, cloth bound. Egg Calipers, Fountain Pen, Chautauqua Mineral Collection and eggs, to exchange for first-class sets, Indian Relics and Curios. Send list and receive mine. WALTER A. LOVETT, Oxford, Mass.

WANTED.—A Safety bicycle. Have to offer \$300 worth of Mounted Birds and Mammals, \$10 worth of stamps, a few eggs, Ornithological papers, and, possibly, some cash. Also want Microscope, Surgical instruments and E flat alto horn. All letters answered. FRED S. HAGGART, Chagrin Falls, Ohio.

THE JULY number of the The Naturalist is unusually interesting and is also profusely illustrated. Among them is an article on the Golden Eagle, illustrated by a fine half-tone; a half-tone of Flamingoes and Nests; a Taxidermists' Camp; etc. etc. Send 5 cents for sample copy. HERBERT STERZING, Austin, Texas.

FOR SALE or exchange. Cedar boat 14 ft. long, 37 inches wide, 11 deep, with nickle oarlocks, four, 7 foot cedar spoon oars, weight 60 pounds, cost \$48 in New York, almost good as new. Also Auto-harp, largest size (No. 6), with a lot of music. Will sell either or exchange for 12ga. hammerless shot gun. All answered. L. B. BOOKER, Pembina, N. Dak.

WANTED.—A Galvanic or Faradic Battery, strong enough for all medical purposes. Must be in A 1 condition. Send full description. Can offer Birds eggs, shells, corals, minerals, or anything in the Natural History Line. FRED D. SNYDER, Barre Center, N. Y.

FOR SALE.—An extremely ornamental and substantial Oaken Egg Cabinet, 62 inches high, 42 inches wide, 30 inches deep. 18 drawers of graduating depths, heavy glass doors, brass hinges, hinge plates, drawer pulls, and etc. Will hold 100 sets of eggs. Portable walnut strips for every drawer accompany it. Would answer equally well for Collection of Etchings, Coins or Silverware. The handsomest Cabinet in the Country. Cash \$185. Price now \$100. Address, RIDLEY PARK FERNERIES, Ridley Park, Pa.

UNUSED Confederate Stamps. These stamps are new and uncanceled, and as I have only a few hundred left, you must write quick. Those collectors not having these stamps in their collection, now's your chance. All of 1863 general issue. 2c rose at 16c; 10c pale blue at 6c; 20c green at 5c. All stamps sent postpaid. Two of each for 50c. postpaid. Address, JAS. ODELL, JR., Austin, Texas.

CRYSTALS.—Recently returned from an extended tour of the Southern States. I can offer collectors and dealers, cheap, some bargains in Minerals. Rare forms in North Carolina Rock Crystals, inclusions of rutile, mica, chlorite, water-drops, graphite, magnetite, red clay, &c. manazite and zircon, and many others. A few exchanges wanted with advanced collectors. Collections sent on approval to responsible parties. E. H. HARN, Blairsville, Pa.

TO EXCHANGE.—Skins and eggs all A1 with full data of this state for such as are not contained in my collection. Send list and receive mine. PAUL BARSTCH, Burlington, Ia.

TO EXCHANGE.—Eggs of this locality for those of others. CHAS. HATCHER, Columbia, Tenn.

WANTED.—The September, October, and December numbers of the "Nidologist." Will pay cash or give good exchange in Bird Eggs. C. B. JOHNSON, Red Wing, Minn.

I HAVE live Hawks and Owls, Coons, Squirrels and Crows to sell cheap or exchange for Indian Relics. I have also Elk and Deer Antlers to exchange for shot gun No. 12, breech loader. C. J. FITE, Denver, Ind.

WILL SELL a fine collection of eggs dirt cheap or will trade for high grade Bicycle. Write for particulars. No postal cards. W. F. LEWIS, No. 93 31st Street, Wheeling, W. Va.

"It gives me pleasure to say that from my recent advertisement in your paper I have received nearly forty answers. In my mind the OÖLOGIST, as an advertising medium, surpasses all other Magazines. May it live long and prosper is the wish of F. I. ATHERTON, Los Gatos, Cal."

LARGE ASSORTMENT of scientific birds' skins and sets of eggs with data, also books, to exchange for eggs and skins; all are first-class in every respect, and are correctly classified. Correspondence invited. S. VAN RENSSLAER, JR., 29 Broadway, N. Y. City.

I AM PLEASED to inform my many friends and patrons that Babbitt's new auxiliary barrel or "tube" with extractor is now ready. The extractor on tube is worked by extractor on gun and ejects the shells to perfection without removing tube from barrel of gun. Although costing double the price of any extractor on the market we shall sell as low as the lowest. Price \$2.50. Send for circular. JAMES P. BABBITT, Taunton, Mass.

WANTED.—Portable Forge; Goodell Turning Lathe; Colt's Double or Single Action Revolver, 38 cal. W. C. F.; 7 x 7 or 7 x 9 Wall Tent; Steel Traps, sizes 0, 1, 2, 4; "Cyclone" Mouse Traps; Schuyler Rat and Mouse Traps; Aneroid Barometer (altitude); Compound Microscope. Have to exchange for above "American Rambler" Bicycle, combination, 24 in. front, 28 in. rear wheels, 1 1/4 in. Cushion Tires, balls all around; "Simplex" Printer, 5 x 8; Babbitt collecting Tube, 38 cal. with Wad Cutter; Climbing Irons, strapped (Lattin's best); "New Rogers" Scroll Saw; Flute, Key of D. Grenadilla Wood, 8 german silver keys; Books on Ornithology, Oology, Travels, etc.; Birds' skins and Eggs, and Mounted Birds. THAD. SURBER, White Sulphur Springs, W. Va.

FOR SALE.—Minerals, Fossils, Curios, Indian Relics, Choice Polished Shells from Wisconsin rivers, Mazon Creek Fossil Plants and Insects. The finest collection of Polished Coral in this country. Beautiful Fossil Fish, Cuneos, Gems, Stones, etc. GEO. WILKINSON, Morris, Ill.

Jy36.

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THE OÖLOGIST.

VOL. XI. NO. 7.

ALBION, N. Y., JULY, 1894.

WHOLE No. 105

Dove Life in Arizona.

The winter and spring of 1893 I spent in Phoenix, Arizona, and as I was myself greatly interested in the birds to be found there, and knowing that at least one species does not come under the notice of many of the readers of the OÖLOGIST, I have thought a few of my observations might be of interest.

It must be understood, that although originally the country about Phoenix was a desert without vegetation, except the usual cacti and stunted desert trees, the application of the irrigation system has reclaimed several hundred thousand acres of fine land, which are now green with grain and alfalfa, and support numberless herds of fine cattle.

Along the ditches which cross and recross the country, carrying the life sustaining irrigation, have been planted rows of cottonwood and willow trees, now of considerable size, and these furnish resting places and nesting places for many birds which would not otherwise be found in that region.

Of the Doves, probably the first in point of numbers is the well known Mourning Dove; indeed they actually swarm everywhere from the city streets to the outskirts of the irrigated lands, building their nests in all kinds of places, often on the ground. In a small patch of mesquite trees, which a friend and I were exploring one day in May for other nests, they were so plentiful that we flushed them from their nests at nearly every step, not a little to our annoyance as the noise they made, together with the suddenness of their movements was very distracting to our attention, and prevented our hearing the movements of other birds. As the bird is so well known I will only add that the first eggs were seen on March

5th and well grown young on the 17th.

We now come to the Inca Dove, a Dove so diminutive and familiar and with such friendly and trusting ways, that one feels at once a kindly interest in it. It is essentially a bird of the garden and cultivated districts and is most often seen in the shade trees bordering the streets and walking about in the grass of lawns or in gardens, busily picking up its food, and allowing a person to pass within a few feet without showing the least alarm. In color it is as dainty and as pleasing as in its habits. The general tint is nearly that of the Mourning Dove, but each feather being edged with a faint blackish line of crescentic shape, gives it a peculiar scaled appearance, hence the name of Scaled Dove by which it is sometimes known. But its crowning beauty lies in the color of the lining of the wings and inner edges of the quills, which are of a rich mahogany, showing every time the bird takes flight. The tail is long in proportion to the bird's length and the outer feathers are much marked with white. The entire length is about 8.00.

As the season for nesting approaches the males get very pugnacious and many are the combats they wage. They also coo almost incessantly a note of two syllables with a decided emphasis on each. It is rather loud and hoarse, with a slightly querulous tone observable. It is sometimes so unceasing as to become quite disagreeable, especially when a great number are together.

I will describe a fight of which I was an interested spectator and which was uncommonly hot and long contested. These two particular birds met in one of their foraging expeditions, on the edge of an irrigating ditch which, how-

ever, had no water in it at the time. As preliminary to the affray, each commenced walking around the other, with about two feet between them, with ruffled neck and lowered head, moving the same ludicrously after the manner of the common cock. A few turns of this sort and they suddenly changed their tactics and approaching near, each one elevated one of his beautiful mahogany-lined wings perpendicularly from his back, apparently as a shield, and sailed in. Each heat was short but plucky, both often rolling over and over on the ground. As soon as they separated each threw his wing straight up again and renewed the attack. During one of these clinches both rolled to the bottom of the ditch, but were not in the least disturbed, nor did they take any notice of me, although I was near enough to reach them with my cane. After several minutes of this, one of them seemed to have had enough, and although he would not fly away, began to avoid the onsets. The victor, much inflated with his success, strutted about with bill filled with feathers, of which a goodly number were lost during the tussles. The incessant flashing of their bright wings during the entire time was indeed a pretty sight.

Another habit of these birds, which I observed, was very interesting. After mating, a pair would approach each other sidewise, place their bills together, then each would turn outwardly, describe a small circle, and put their bills together again, their heads pointed as at first. This would be kept up for several minutes with the regularity and precision of a dance.

The nest of this Dove is placed in shade trees, in gardens and along sidewalks, usually at a moderate elevation, and being slight, occupies but a short time in building.

Both birds work at it, one, presumably the female, remaining at the nest, while the other brings the material,

which he seldom goes far to obtain. Dry grass stems, very fine twigs and a few hairs are generally used.

When completed, the female immediately deposits two pure white eggs; the ends of one, in all sets taken by me, being more pointed than the ends of the other. They average .80x.65. My first set was taken on March 10, but half grown young were found on March 5. As I continued to find sets up to the time of my leaving, about June 1st, I suppose several broods are raised.

I will now close with this Dove by describing a tragedy in which one figured.

I was standing under some large cottonwoods, watching a Vermilion Flycatcher, who was working upon her nest, when my attention was attracted by a scuffle which was going on at a short distance from me, and going closer was not a little surprised to see that a Shrike had seized a Dove by the neck and was jerking and thrashing it upon the ground most vigorously. I attempted to rescue the victim, but too late, it being already dead. The Shrike flew away and so I lost also the opportunity of seeing what he would have done with so large a prey. I had never known one to kill so large a bird.

The White-winged Dove was scarcely seen during the winter but by April they were more common and eggs were found in May and at the time I left they were seen in large flocks, but the number of nests obtained did not seem at all to compare with the number of birds. Their cream colored eggs are well known and I will only say that in that locality, cottonwoods and willows seemed to be their preferred nesting sites. This Dove is a large and quite handsome bird and its call is sonorous and far reaching.

HAROLD H. DODGE.

Notes From Audubon's Biography.

PART II.

America being the native land of Audubon, he tried to get his drawings engraved in the United States. Wilson's engraver, among others, gave it as his opinion that the drawings could never be engraved. In New York other difficulties presented themselves, and he finally determined to go to Europe. Great was the despondency he felt as he approached the shores of England. He had not a single friend or acquaintance to whom he could go, although he was the bearer of many letters of introduction from eminent American statesmen. As he walked the streets of Liverpool for the first time his heart nearly failed him, for not a glance of sympathy did he meet in two days of wandering. But how soon was this changed! The very first letter tendered procured him a host of friends. His drawings were publicly exhibited and publicly praised. The first difficulty was surmounted. The Rubicon was crossed. Honors, which on application being made through his friends, Philadelphia had refused, Liverpool heaped upon him. He left that emporium of commerce, with many a passport and additional letter of introduction, bent upon a visit to fair Edina. He arrived at Manchester, and his visit was made very pleasing by the courtesy and friendship of all whom he met. Friends pressed and urged him to visit the beautiful villages of Bakewell, Mattlock and Buxton. It was a trip of pure enjoyment.

Audubon's journey to Scotland was performed along the northwestern shores of England. He passed in view of Lancaster Castle, and his way led him through Carlisle. The principle scientific and literary characters of the ancient metropolis of Scotland received him like a brother. The Royal Society,

The Wernerian Natural History Society, The Society of Scottish Antiquaries, the Society of Useful Arts, and the Scottish Academy of Painting, Sculpture, and Architecture, spontaneously and gratuitously enrolled him as a member. In this capital commenced the publication of his Illustrations, and there it might have been accomplished had not unexpected difficulties come in the way. His engraver, Mr. W. H. Lizars, advised him to seek an artist in London, and there after many fruitless inquiries he became acquainted with Mr. Robert Havell, Jr., by whom his work was concluded to his complete satisfaction.

Four years have passed. One volume of Audubon's Illustrations, containing one hundred plates, has been placed before the public. Two objections were raised to the mode in which the work was published: the great size of the paper upon which the representations were made, and the length of time necessary for their completion. As to the size of the paper, which was complained of by some, it could not be avoided without giving up one of the principal characteristics which Audubon wished to give to it. Two of the greatest authorities on Natural History, —Swainson, the ornithologist, and Cuvier, the center of zoological science at that time,—spoke with enthusiasm in favor of this idea.

Soon after the engraving of his work was commenced Audubon bade adieu to his Edinburgh friends, whose many kindnesses were impressed indelibly upon his heart. The object of his journey was London. At Newcastle-upon-Tyne he made his next halt, and here many, among whom was the venerable Bewick, treated him with a great deal of kindness and helped to swell his list of subscribers. It was in this place that as Wilson had done in America, Audubon exhibited some engravings of his work, together with the contents of his portfolio. In speaking of this Au-

dubon says; "I cannot say that the employment was a pleasant one to me, nor do I believe it was to him (meaning Wilson,) but by means of it he at the time acquired that fame of which I also was desirous of obtaining a portion; and knowing that should I be successful it would greatly increase the happiness of my wife and children, I waged war against my feelings, and welcomed all, who, from love of science, from taste, or from generosity, manifested an interest in the 'American Woodsman' "

Audubon continued the exhibition of his drawings until he reached the skirts of London. The next place he visited after leaving Newcastle-upon-Tyne was York, where he formed the acquaintance of Mr. Phillips, who became an eminent Professor of Geology soon after.

Audubon's second visit to Manchester he obtained upwards of twenty subscribers in one week, and made some lasting friends. He continued his journey through Chester, Birmingham, and Oxford, and passed in sight of the famous Castle of Windsor, and reached London soon after.

Audubon had eighty-two letters of introduction in his budget, and besides these was the bearer of general letters from Henry Clay, Andrew Jackson, and other prominent American statesmen, to all our diplomatists and consuls in Europe. After a day spent in sight-seeing he devoted the rest of his time to visiting. From one great man's door to another he went, but what was his surprise and disappointment, when, after wandering the greater part of three days, early and late, he had not found a single individual at home. Wearied and despondent he thought his only chance of getting his letters delivered was to consign them to the post, which he accordingly did, with the exception of one, which was addressed to J. G. Children, Esq., British Museum. To him Audubon went, and in him

found a true friend. Mr. Children pointed out to him his error in depositing his letters in the post-office. In the course of a week a few of those to whom his letters were addressed called at Audubon's rooms and left their cards, and by degrees he became acquainted with them. He also renewed his acquaintance with Lord Stanley, and became known to other noblemen.

Audubon was subsequently elected a member of Linnæan and Zoological Societies.

In the summer of 1828, Audubon with his friend Swainson went to Paris, where Audubon made the acquaintance of the great zoologist, Baron Cuvier. M. Lesson, and several other eminent men, besides M. Redoute, a great master of flower painting. While in Paris they were treated with great kindness and cordiality, and were gratified by the readiness which the interesting specimens in the great Museum of France were submitted to their inspection. Through the influence of M. Redoute, Audubon was introduced to the Duke of Orleans, who later became King of France.

Fox vs. Crows.

A very interesting incident showing the pugnacity of the common crow (*Corvus americanus*) was recently related to me.

The gentleman who made the observation, and whose veracity can be depended upon, told me that one afternoon during the early part of last November he was out driving near Merion Square, Philadelphia when his attention was attracted by a large number of crows that were in a corn field. He at first thought they were after the corn, which had not yet been husked, but more careful observation showed that the object of attention and excitement among the crows was not corn but a common Red Fox (*Vulpes vulpes*) that

was slowly moving up across the field, on every side, besieged by crows, which attacked the fox most vigorously from all directions. How the affair ended, whether the fox escaped from his feathered enemies, or succumbed in the struggle for existence, I do not know, as the party who informed me was not sufficiently interested to follow up and witness the end of the scene.

It is a wellknown fact that crows frequently destroy young chickens, and the eggs of both the domestic fowl and wild birds, and I have known them to attack larger animals, but I think their making war on foxes is something new.

W. E. ROTZELL, M. D.,
Norberth, Pa.

A Few Field Notes.

May 20, 1893.—The Green Heron is not a rare bird in this neighborhood. While hunting for their eggs today, I was successful enough to find two nests, one containing eggs, and the other young birds. The two nests were very roughly made of sticks. They were both situated in a small plum thicket, about two yards from each other. I climbed up to one and found three eggs in the nest, and, looking across from the tree in which I was in, into the other nest, I saw that it contained three young birds about two days old. These two nests had evidently been visited before I reached them, for this bird rarely ever lays less than five eggs.

May 21. I was successful enough to find a nest of the Yellow-billed Cuckoo. This bird is gradually becoming scarcer in this neighborhood. The nest was built without much material and contained two fresh eggs. It was situated in a beech tree about fifteen feet from the ground. Going on a little further through the grove of beech trees, I find a nest of the Baltimore Oriole high up in a sugar maple. This nest contained four eggs partly incu-

bated. This bird is not as common as its cousin, the Orchard Oriole.

May 22. To-day I went out and found about two dozen Mocking-bird, Cat-bird and Brown Thrush's nests. Going homeward I found a set of four of the Wilson's Thrush, incubation about two thirds. This bird is becoming rare here.

May 23. Found two nests of the American Crow. One nest contained a set of five eggs, badly incubated. The other nest contained four fresh eggs. One nest was placed in a tall maple about thirty-five feet from the ground. The other was in a cedar about twenty feet from the ground. The nest in the maple was almost twice as large as the one in the cedar.

May 24. Climbed a dead oak and was rewarded by getting a fine set of the Turkey Vulture. This bird is very common here, but it is very hard to find its eggs. The two eggs that I found were placed in a slight indentation of a large limb. The eggs were beautifully marked and were fresh.

May 25. Secured a fine set of two of the Red-tailed Hawk. The nest was placed in the top of a very large oak. It was about one hundred and fifteen feet from the ground. The nest was of an enormous size. It was very rough on the outside, but as usual, smooth on the inside, and had a few oak leaves in it. One of the eggs was so heavily blotched that the ground color could hardly be seen, and the egg itself would hardly be recognized as a Red-tail's, while the other egg hardly had a speck on it.

May 26. Found two nests of the Field Sparrow to-day. This bird is common here as it is almost everywhere. One nest had young ones in it, while the other had only one egg. Going into an orchard, I found five nests of the Orchard Oriole. I took two plainly marked sets of four eggs each. In a half dead willow I found a fresh

set of five of the Bluebird. These eggs were perfectly white.

May 27. Went after some very common eggs to-day, namely, the Bronzed Grackle. This bird is more numerous than any we have, except the English Sparrow. Going down the bank of a creek, my first find is in an elm. There where five nests in this tree, out of which I took three fresh sets, two of four, and one of five. This tree was leaning very far over the water, and if the creek had risen three feet, two of the nests would have been washed away. In four more elms I find at least two dozen nests, but only take one more set. The nest from which this set was taken, had hardly any more material in it than a Mourning Dove's.

May 28. Found two nests with four eggs each of the Bee Martin, or King bird. Both sets were beautifully marked, and were fresh. These birds are very common here. Going home through a little mark I find two nests of the Red-winged Blackbird. The nests were about four feet apart. Each contained a set of four eggs, which were fresh.

May 29. Found a fresh set of seven of the Red-headed Woodpecker. Going a little farther from the tree, out of which I got these eggs, I find a Flicker's nest with two eggs in it. In a cedar tree, I find a set of four of the Chipping Sparrow, and not ten feet from this tree, a set of five of the Meadowlark. Both sets were partly incubated. In a beech I find a set of the Blue Jay, also slightly incubated. In a high sugar maple, I find a nest of the Red-eyed Vireo containing two eggs. In a little patch of briars I find a nest of the Towhee with one egg in it.

May 30. Today I found two sets of the Cardinal each of four eggs. Both sets were fresh. In a Brown Thrush's nest, out of which I have taken a set of four, I find that a Mourning Dove has taken up its head-

quarters. Her set of eggs are now in my possession. In an old barn, I find a nest of the Barn Swallow with two eggs. In the chimney of an old deserted cabin, I find a set of two of the Chimney Swift.

JOHN A. McEWEN, JR.,
Bell Buckle, Tenn.

Bell's Vireo.

Bell's Vireo, though not uncommon in this locality of central Illinois, is quite unknown except to the enthusiastic collector and the trained ornithologist. Its domicile is seldom harried by prying small boys, and even the skillful collector must bend in humility when he seeks intimate acquaintance with this species by visiting it in its haunts. It is no gadabout and peddler of village gossip, but passes its days contentedly warbling, literally, under its own vine and figtree.

Like other vireos, it does not display its best manners and warble its sweetest notes away from home among strangers, but sings the most gayly near the vines and bushes where hangs its gossamer-covered home. Its singing in any particular vicinity is a pretty certain index that its nest is concealed in the neighboring tangle.

Pass its haunts daily and the chief evidence of its existence is the short, emphatic, vireo-like notes coming from the bushes, a warble shorter than the song of any of the vireos, uttered nervously, with increasing force, pith, and rapidity to the end. The singer himself is shy and avoids listeners. First he is heard ahead of you, and you see him flirt out from the foliage, quickly turn, and dart among the leaves again, uttering a "quit" or "quit that," as he sports with his spouse and chases her through the shrubbery, both talking earnestly and rapidly as they dart in and out of the bushes. You gently press forward, eager to identify and observe the restless musicians, but now

they are behind you singing from the tangle, and you only occasionally obtain a glimpse of them flitting among the stems and leaves. However, press aside the bushes and crawl into the tangle, crouching among brambles which penetrate all the salient features of your anatomy. Soon you will hear the restless creatures warbling even above your head. At first he sings "*quit, oh quit, now quit, why can't you hear?*" in the manner above described, and then perhaps he soliloquizes softly to himself in a subdued, faraway tone, barely audible to your attentive ear—a song which entirely captivates you, and you learn to love the shy, modest songster.

Along the edge of the woods north of my hometown, there was formerly a thicket of wild plum trees, bordering a small branch which flowed into the creek some eighty rods beyond. The thicket has now almost disappeared, and on either side of the branch are cultivated fields, but fringing the branch are small bushes of hazel, plum, alder, and wild grape vines. It was there that my ears were first tuned to the melody of Bell's Vireo, and there I first studied its habits. Forty rods farther north along the same branch is the remnant of the plum grove, interspersed with volunteer bushes and vines, forming another tangle where this vireo sings and breeds unmolested, except by such cranks as ourselves. Across the creek, and extending forty rods beyond, is a narrow, abandoned road between two hedgerows, now tangled almost impassable with bushes and vines, amid which hang the tenelements of Bell's and the White-eyed Vireo, though the latter is the more numerous in this haunt. But Bell's Vireo, though losing none of its shyness, often makes its residence in more public, though not more open, situations. Wild blackberry, hazel, and alder bushes overhanging ditches along

roadsides are frequented, and its peculiar, characteristic song greets the passers-by, who are generally deaf and blind to the rounds and sights ever inviting our attention.

The species begins to nest soon after the middle of May. On May 19th, a friend who was collecting with me, found a nest of Bell's Vireo containing one egg, which we left until May 24th, when we found four fresh eggs. This nest was suspended by the brim from several twigs, two feet from the ground on the outer side of wild plum bushes, along a hedge crossing the little branch previously mentioned. While nests of most of the other Vireos are suspended from two forking horizontal twigs, the nest of this species often depends for its support on more than two twigs.

The nest was well concealed by surrounding leaves and bushes, and only by pulling aside the stems, can the structure usually be found, or else by getting down where one can look through the stems, unobstructed by leaves. Like all the low-nesting Vireos, Bell's is very untidy about its home, a characteristic of the site being the amount of white excrement dropped on the subjacent leaves, rendering the premises ill-kept and filthy. The nest itself, however, catches none of this matter, and is kept fresh and clean.

Both male and female, being seldom far away from their lowly home, are jealous watchers of its privacy, and strongly object to an examination by intruders. When their nest is disturbed, both birds utter a scolding wren-like noise represented by the sound of *pa* in the word pair, repeated rapidly, more rapidly at times by the female than one can count, and they will fly quite near the observer in their nervous efforts to protect their property and embryonic family.

Seven nests, examined thus far this season, show a similarity in location and construction. One found on June

4th was in a small clump of wild blackberry bushes overhanging a small, dry ditch along the road followed by the village boys on their fishing trips. It was the least concealed of all the nests found, and soon was overtaken by self-invited disaster, though I suspect that Blue Jays were the guilty parties. The nests are made largely of grayish hedge bark fibres, among which are worked a sort of bright clean soft husk in small pieces, fine dried grass, bits of paper, and pieces and threads of gossamer. Outwardly, the nest generally presents an unfinished appearance, the bark fibres and pieces of husk being allowed to hang loosely from the base and sides of the nest. The lining is of fine dried grass with here and there a round flat flake of gossamer. The cavity is firmly rounded and smoothly finished, averaging one inch and five-eighths in diameter, by one and one-half in depth.

We never found more than four eggs in a nest, and that number appeared to constitute a full set, the complement being larger than the complements of most of the other Vireos. Though most observers report the Cowbird as imposing its eggs upon this species, none of the nests examined by us contained eggs of the parasite.

P. M. SILLOWAY,
Virden, Ill.

Nesting Habits of Richardson's Merlin.

On May 5th, while out looking for Hawks' eggs, I came to a clump of trees, one of which had a Hawk's nest in it. While rapping the trunk a small Hawk flew screeching from a tree on my left. Thinking it might have a nest near by I rapped the trunk of a small poplar which had several woodpecker holes in it, the Hawk meanwhile kicking up a great disturbance overhead. As nothing came from this tree, I tried another, and at the first rap its mate flew from the tree. On climbing up I

found a cavity in the top, where the trunk had been broken off, and inside, it, one egg considerably larger than that of a Sparrow Hawk, and resembling the Osprey's eggs in my collection, in style of coloring. I left this egg resolving to visit the place again on the Saturday following. (May 12.)

These birds were new to me, but I was certain they must be Merlins. So on the 12th, when I went again I took my gun with me, intending to shoot one or both the birds, to make certain of their identity.

On climbing to the nest I found four handsome eggs, which I took, and also shot the female bird, which I fully identified. As these eggs were perfectly fresh, I concluded that one was laid every other day, and not daily, as I think most birds do.

The cavity these eggs were in was about eight inches across, one and one-half feet deep, and 22 feet from the ground, in a black poplar. The birds were very bold, flying round my head and perching on the tree within three or four feet of me. The female was considerably larger than the male, and far bolder.

The eggs are very handsome and are of two styles of coloration. Two are heavily blotched all over the larger half of the egg, while the other two are spotted over the entire surface, the ground color being visible only at the tip, the markings on the larger end are, however, slightly heavier. They are buffy white ground color, blotched and splashed with different shades of reddish brown and cinnamon. Sizes, 1.66x1.25, 1.59x1.25, 1.60x1.24, 1.61x1.24.

As this is, without exception, the handsomest clutch in my collection, I am doubly proud of my find.

My first large Hawk's nest this season was taken on May 2d, with almost fresh eggs, so I think these Merlin's build just as early as the larger Hawks, and fully a month earlier than the Sparrow Hawks.

On May 19th, while on an island in the river, I saw a female Merlin fly from a large nest, from which I had taken four eggs of the Rough-legged Buzzard only ten days before, but was very disappointed that I could not get to the nest, as the floods in the mountains made the river so high as to be utterly impassable.

J. E. HOUSEMAN,
Calgary, N. W. T.

Nesting Habits of the Passenger Pigeon.

BY EUGENE PERICLES.

There are hundreds and perhaps thousands of the younger readers of the OÖLOGIST who have never seen a Passenger Pigeon alive. In fact there are many who have never seen a skin or stuffed specimen, for the species is so rare now that very few of the younger collectors have had an opportunity of shooting a bird. And of the present generation of oölogists, the ones who have secured a set (one egg) are indeed very few.

Many of the older ornithologists can remember when the birds appeared among us in myriads each season, and were mercilessly and inconsiderately trapped and shot whenever and wherever they appeared. I could fill a book with the accounts of their butcheries, and could easily cause astonishment in my readers by telling of the immense flocks which were seen a quarter of a century ago. But wonderful as these tales would appear, they would be as nothing compared to the stories of the earlier writers on birds in America. The readers of the OÖLOGIST may look over the writings of Audubon and Wilson, if marvelous facts on the size of the flocks of the wild pigeon are desired.

No one can be surprised that the Passenger Pigeon, *Ectopistes migratorius*, LINN., has become so reduced in num-

bers, for the war waged upon them for generations was so severe, that next to total extermination was bound to follow, unless the birds selected different routes of migration, and quarters for nesting far removed from the habitations of man.

Of course we know that the net and gun have been the principle means of destruction, but it is almost fair to assert that even with the net and gun under proper restrictions, the Pigeon would still be with us in hordes, both spring and autumn. For many years hunters (butchers) used to shoot the birds regularly at their nesting places, while the netters were also found near at hand.

I have seen many birds taken by unsportsmanlike netters, for the market during spring migrations, and the published accounts of the destruction by netters is almost beyond belief. Doctor Kirtland states that near Circleville, Ohio, in 1850 there were taken in a single net in one day 1285 live Pigeons.

The Passenger Pigeon was in the habit of crossing the Ohio River by March first in the spring migrations, and I have noted the birds several times in Michigan in February. But this was not usually the case, for the birds were not abundant generally before April first, although no set rule could be laid down regarding their appearance or departure either in spring or fall. They usually came with a mighty rush. Sometimes they did not appear, or at least only very sparingly. Their nesting sites would remain the same for years if the birds were unmolested, but they generally had to change every year or two, or as soon as the roost was discovered by the despicable market netter.

Where the mighty numbers went to when they left for the South is not accurately stated and of course this will now never be known, but they were

found to continue in flocks in Virginia, Kentucky and even Tennessee.

The birds possessed great powers of flight as instanced by the account of an early writer. He says that Pigeons were shot in New York which still held undigested rice in their stomachs. It is reasoned that this rice could not have been procured nearer than the Carolinas, hence it will be seen, as the bird's digestion is rapid, that these migrants must have made very fast time. But this tale must be taken with some allowance.

It would be agreeable to give your readers accounts of some old-time Pigeon haunts, but space does not permit, and moreover, most of your readers prefer notes on nesting. Without giving notes on arrival and mating, we will consider the nesting habits.

In the latter part of April or early May the birds began nesting. The nest building beginning as soon as the birds had selected a woods for a rookery, the scene was one of great activity. Birds were flying in every direction in search of twigs for their platform nests, and it does seem that each pair was intent on securing materials at a distance from the structure. Many twigs were dropped in flying or at the nest, and these were never reclaimed by their bearers, but were often picked up by other birds from another part of the rookery. This peculiarity in so many species of birds in nest building, I could never understand.

It takes a pair of Pigeons from four to six days to complete a nest, and any basket maker could do a hundred per cent. better job with the same materials in a couple of hours. In the nest of the Pigeon, man could certainly give the birds points for their benefit, for it is one of the most shiftless structures placed in trees that I have met with.

The nest is always composed of slender dead twigs, so far as I have observed, or ever learn from others, and

in comparison, though smaller, much resembles some of the Heron's structures. In all nests that I have observed the materials are so loosely put together that the egg or young bird can be seen through the the latticed bottom. In fact, it has been my custom to always thus examine the nests before climbing the tree.

The platform structures vary in diameter from six to twelve inches or more, differing in size according to the length of the sticks, but generally are about nine or ten inches across. An acquaintance of mine had tamed some wild birds, which at last bred regularly in captivity. These birds were well supplied with an abundance of material for their nests and always selected in confinement such as described above, and making a nest about nine inches in diameter.

The breeding places selected are generally found in oak woods, but the great nesting sites in Michigan were often in timbered lands I am informed. The height of the nest varies. It may be as low as six feet or all of sixty-five feet from the ground.

Passenger Pigeons are always gregarious when unmolested, and hundreds of thousands sometimes breed in a neighborhood at one time. It is impossible to say how many nests were the most found in one tree, but there are authenticated instances of a hundred. One man, in whose veracity I rely, informs me that he counted one hundred and ten nests in one tree in Emmett county, the Lower Peninsula. Still this may not be correct, for we all know how easy it is to be deceived in correctly counting and keeping record of even the branches of a tree, and when these limbs are occupied by nests it is certainly doubly difficult, and the tendency to count the same nests twice is increased.

The first nests that I found were in large white oak trees at the edge of a

pond. The date was May 17, 1873. The nests were few in number and only one nest in a tree. There was but a single egg in a nest: in fact this is all I have found at any time. The last nest that I have met with south of the 43rd parallel was 40 feet up in a tamarack tree in a swamp near the river, June 1, 1884. This nest was alone and would not have been discovered had not the bird flown to it. I have found several instances of pairs of pigeons building isolated nests, and cannot help but think that if all birds had followed this custom that the Pigeons would still be with us in vast numbers.

As late as May 9, 1880 my lamented friend, the late C. W. Gunn, found a rookery in a cedar woods in Cheboygan county. These nests contained a single egg each and he secured about fifty fresh eggs. He did not think their number excessive as the netters were killing the birds in every direction. But now we can look upon such a trip almost as a devastation because the birds are so scarce.

In 1885 I met with the Pigeon on Mackinac Island and have found a few isolated flocks in the Lower Peninsula since then, generally in the fall, but it is safe to say that the birds will never again appear in one-thousandth part of the number of former years.

The place where the birds are nesting are interesting spots to visit. Both parents incubate and the scene is animated as the birds fly about in all directions. However, as the bulk of the birds must fly to quite a distance from an immense rookery to find food, it necessarily follows that the main flocks arrive and depart evening and morning. Then the crush is often terrific and the air is fairly alive with birds. The rush of their thousands of wings makes a mighty noise like the sound of a stiff breeze through the trees.

Often when the large flocks settle at the roost the birds crowd so closely on

the slender limbs that they bend down and sometimes crack, and the sound of the dead branches falling from their weight adds an additional likeness to a storm. Sometimes the returning birds will settle on a limb which holds nests and then many eggs are dashed to the ground, and beneath the trees of a rookery one may always find a lot of smashed eggs.

Later in the breeding season young birds may be seen perched all over the trees or on the ground, while big squabs with pin feathers are seen in or rather on the frail nests or lying dead or injured on the ground. The frightful destruction that is sure to accompany the nesting of a rookery of Passenger Pigeons is bound to attract the observer's eye. And we cannot but understand how it is that these unprolific birds with many natural enemies, in addition to that unnatural enemy, man, fail to increase. If the Pigeon deposited ten to twenty eggs like the Quail the unequal battle of equal survival might be kept up. But even this is to be doubted if the bird continues to nest in colonies.

Many ornithological writers have written that the Wild Pigeon lays two eggs as a rule, but these men were evidently not accurate observers, and probably took their records at second hand. There is no doubt that two eggs are quite often found in a nest, and sometimes these eggs are both fresh, or else equally advanced in incubation. But these instances I think are evidence alone that two females have deposited in the same nest, a supposition which is not improbable with a gregarious species.

That the Wild Pigeon may rear two or three young in a season, I do not doubt, and an old trapper and observer has offered this theory to explain the condition where there are found both egg and young in the same nest, or squabs of widely varied ages. He as-

serts that when an egg is about ready to hatch, that a second egg was deposited in the nest, and that the squab assisted in incubating the egg when the old birds were both away for food, and that in time a third and last egg was laid, so that three young were hatched each season, if the birds are unmolested.

This peculiarity may exist with the Pigeon, but I can add nothing to further it from my own observations, except to record the finding an egg in the nest with a half-grown bird—the only instance in my experience. From watching the ways of some captive birds kept as stool pigeons, I am well satisfied that two young are not rarely hatched at some weeks apart, and they do fairly well in confinement.

The young are fed by a process known as regurgitation; the partially digested contents of the old bird's crops being ejected into the mouths of the squabs.

The position of the nest varies greatly. Often the nests are well out on slender branches and in dangerous positions considering the shiftlessness of the structure. When a rookery is visited, nests may be found in all manner of situation. I have found single nests built on small twigs next the body of an oak tree, and at a height of only ten feet, and again have seen nests forty feet up in thick tamaracks.

The eggs do not vary much in size or color. They are white, but without the polish seen on the egg of the domestic Pigeon. About one and a half by one inch is the regulation size.

By reference to old price lists of nearly a quarter of a century ago I find that the eggs were then listed 25 cents, while it would be difficult to secure good specimens at present at six times the figure.

A Curious Freak.

One day in July, when passing through a grove I discovered a small

stump well whitewashed, which caused me to look more closely, and as I did so, I saw a Flicker on one side of it. I picked the bird up and found it was totally blind. I would think by the looks that the bird had been there several days. It was a young bird, but could fly, had it dared to leave the stump. Of course I left the bird as I knew the mother could take the best care of it.

A. E. KIBBE,

Mayville, N. Y.

Some Notes on the Habits of the Arkansas Goldfinch.

The Arkansas Goldfinch, or Wild Canary, is a resident with us all the year. They live on the seed of various weeds and thistles, fruit buds and fruit especially cherries.

They begin house-keeping in early April; the female building the nest, which is a beautiful little structure; of rope strand, weed fibres, horse-hair, feathers, string, spiders web, and cotton, in any suitable tree at a height of from four to twenty feet.

Apr. 4, 1893, I found a pair of birds building a nest in a cyprus tree in our yard. I hung some pieces of cotton around in the tree, and the female took it all to line her nest. The nest contained one egg Apr. 15 and four days later I collected a nice set of four eggs from it. A friend of mine found a nest of this species, built on a small ledge of a pillar that supported the top of the front porch, on a house.

I found one nest, on the second of June, 1893, in the upright crotch of a small maple, four feet from the ground, which contains five fresh eggs and the broken shell of another.

The eggs are almost invariably four in number, of a pale-greenish-blue color.

The following nests have been found this year, 1893. No. 1 Apr. 1. Nest found on a small horizontal limb of a

cypress tree, 10 feet from the ground. Four badly incubated eggs. No. 2. Apr. 11. Nest in a cypress tree, on the end of a horizontal limb, 8 feet from the ground. 4 fresh eggs. No. 3. Apr. 16. Nest in the brushy end of a large limb of a live oak tree, 15 feet up. This nest is composed almost entirely of cob-webs. 4 fresh eggs. No. 4. Apr. 20. Nest placed in a small pine tree, on the side of a road, 6 feet up. 4 fresh eggs.

The average nest measures in diameter, $2\frac{3}{4} \times 1\frac{1}{2}$ inches, and in depth $2 \times 1\frac{1}{4}$ inches.

WM. L. ATKINSON,
Santa Clara, Cal.

The Language of Crows, and Other Notes.

Did you ever think of what jolly, good natured fellows Crows are?

If not, just think of it a bit. In the first place, they are fond of company and are willing to practice self denial for the benefit of their companions, as is seen in the sentinel who sits on the top rail of the fence and keeps guard, while his companions feast on blue grass, bulbs, worms and stray grains of corn in the pastures or meadow.

Then the Crows are good talkers, (in Crow language of course) and apparently many a joke passes among them as they skim over the fields in flocks of twenty to a hundred or two, in wet and windy weather. The vocabulary of the Crow is probably as complete as that of any American bird, of the Eastern states at least. The common fowl has perhaps a more complete vocabulary, but since it is an exotic and is domesticated as well, it does not come under this class. The language of the Crow can be learned with but little difficulty; and to an ornithologist it is often convenient, in order to tell what is going on in a neighboring woods.

The different notes of the Crow are rather hard to put into words, as for several notes, quite different to the ear,

the same spelling is required. Below is given the vocabulary of the Crow, as correct as the author can make it, as he has found it.

1. *Krak, krak, krak, krak.* [Sound *a* as in *all*.] Short call note, used while flying to and from roost.

2. *Kree-ak, Kree-ak.* [Sound *a* as in *last*.] Loud notes uttered upon the discovery of "a man with a gun," in woods. Uttered while flying about over the woods, and used as a warning.

3. *Hawk, hawk, crow-hawk, hawk,* etc. Notes uttered upon the discovery of an Owl, and during said Owl's persecution.

4. *Hawk hawk hawk hawk.* Notes uttered usually in four's, with great rapidity, by Crows calling for reinforcements to torment an Owl, uttered while flying through or around a woods.

5. *Hawk, hawk, hawk.* The same sound as No. 4, but uttered more leisurely. Ordinary call-note; not short as No. 1 and uttered during short flights, ordinary Crow business, and during the large spring "camp meetings," held in open fields. This uttered more rapidly but not so fast as No. 4, is the alarm note given by a sentinel to a feeding flock, to indicate that the time for flight has come.

6. *Ha-a-awk, ha-a-awk.* [Sound *a* as in *all*.] The call-note of Crows in flocks in windy, wet weather; simply number five prolonged, not harsh as in number seven.

7. *Kra-a-a-ak, [a as in last] and kra-a-a-uk [a as add, u as but].* A harsh, rattling croak, uttered while diving at an Owl, and frequently heard from Crows otherwise silent, during the breeding season, and occasionally at other times.

8. *Crow hawk, crow hawk.* The note uttered by solitary Crows during the autumn months. The first syllable of the word is uttered in a very high pitch for a Crow, the second much lower, thus differing from No. 3, which is the

same pitch throughout. This note imparts an uncomfortable feeling to the human hearer, and is probably the sound mentioned by Bryant in "The Death of the Flowers," where he says, "And from the wood-top calls the Crow through all the gloomy day."

The notes of the young bird I am not so familiar with, but should any ornithologist hear uttered in a rather flat voice, during May or June, the following, he may understand that a young Crow is being fed

Ka-a, ka-a, ka wa wa wa wa, ka-a, [a as in far.] It is the voice of a young Crow whose food is in sight, and the "*wa wa*" part occurs during the passage of food down the young Crow's throat.

These, so far as the writer knows, are all the notes of the Crow having a definite meaning. These can readily be distinguished and understood after some study and observation.

There is one use of Crows I have never seen mentioned and that is their value as "dogs" to an Owl hunter. Here, where the Great Horned Owl is not common, and is almost as hard to shoot as a Crow is in winter, when a hunter concludes to take an Owl hunt, he finds the Crows to be valuable assistants.

When he goes to the woods he endeavors to scare out an Owl. If he finds one, as soon as it flies a band of Crows see and fly after it. When the Owl alights, part of the Crows perch in the tree, over him, while the rest go to neighboring woods, after more Crows. The hunter, learning of the position of the Owl, by the Crows sitting above, moves forward as cautiously as possible. When he is nearly in range the Crows silently leave, leaving the Owl still sitting in the tree.

Should the Owl see the sportsman before the latter is in range, and should fly to the other end of the woods, the Crows, their numbers now increased by arrivals from other woods join in the

chase, now and then diving at him as he flies, till he alights. Then the Crows amuse themselves by diving with an angry croak, and sailing round and round the tree occupied by his Owlship, like a swarm of bumble bees, until they see the hunter coming through the leaves. Then they again silently depart. Sometimes the Crows gather in such numbers that there will be four or five hundred Crows after one or two Owls.

I have noticed that several Great Horned Owls captured after having been worried by Crows, had the eyelids swelled and filled with blood. I suppose the Crows were responsible for this, but do not know. Does any one?

Before closing, I wish to impose upon the readers of the most excellent OÖLOGIST a "tame Crow story."

A friend had a tame Crow who had learned to soften dry crumbs by soaking them in water. One day he was discovered standing by a cup of water, in which he had put a box of tacks, just opened. Upon being scolded for this, he took the box out to the garden and upset it. At another time, while his owners were placing strawberry runners, and putting clods upon them, the Crow amused himself by pulling up the runners as fast as they were placed, and out of reach of the boys.

FALCO.

Wilson's Ornithological Club.

The Wilson's Ornithological Club was organized at San Bernardino, Cal, June 9, 1894. The following officers were elected: President, Edward Wall, San Bernardino; Vice-President, Wesley Bead, Colton; Secretary, Arthur Whiting, San Bernardino; Treasurer, E. D. Palmer, San Bernardino.

The President writes us as follows:

"Anyone wishing to join with us in the study of our birds, their nests and eggs, please send their address to the President or Secretary.

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A Monthly Magazine Devoted to
OÖLOGY AND ORNITHOLOGY.

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ALBION, N. Y.

FRANK H. LATTIN, WALTER F. WEBB,
Editors.

Correspondence and Items of interest to the student of Birds, their Nests and Eggs, solicited from all.

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*. Articles, Items of Interest and Queries for publication should be forwarded as early in the month as possible.

ENTERED AT THE POST OFFICE AT ALBION, N. Y., AS SECOND-CLASS MATTER.

Under recent date we received the following item of interest from Chas. C. Purdum, Wood's Holl, Mass. "Yesterday I had the rare fortune to find in an old cedar swamp, about two miles from home, two sets of three each of the Black throated Green Warbler, (*Dendroica virens*,) I know of only two other sets having been taken in Barnstable Co., although I have observed many of the birds."

H. R. Taylor, the hustling editor and publisher of the Nidiölogist, is not of the closet kind, but can be ranked with the foremost of our active Field Oölogists. Among the "nice things" he collected early in the present season, we note thirteen eggs of the Golden Eagle and a set of five White-tailed Kite.

Rev. P. B. Peabody, who is now Chaplain and Instructor in Greek, Latin and Higher English at the Breck School, Wilder, Minn., in a letter of recent date, he writes: "You will be interested to know of my having taken, personally, April 7, at the famous Heron Lake, six miles from here, a set of Canada Goose.

Neorology.

During the past few months, through the intervention of that grim power, Death, we have been obliged to erase the names of the following active collectors and students from the subscription books of the OöLOGIST.

Brill, Wm. B., Hempstead, L. I. N. Y.
Dodge, Harold H., Mentone, Calif.

Quincey, Edward, Boston, Mass., and
Isle on Haute, Maine.

Turner, Wm., St. Paul, Minn.

Accompanying the Mss., Dove Life in Arizona, which appears in this issue of the OöLOGIST; a relative writes as follows:

"The writer of the enclosed, [Harold H. Dodge], a subscriber and occasional contributor to the OöLOGIST, has recently passed to the higher life. He was a devoted lover of Nature in every form of her manifestation, and a short time before his death he prepared, from his notes, this article for your journal, and I herewith send a copy for insertion, should you desire to do so."

Song of the Thistle-bird.

I can think of no bird that has such a light-hearted song as the American Goldfinch, and yet it seems to carry with it a sad feeling at the same time.

The bird seems to have had some heavy sorrow that it is trying to get rid of in song.

In its flight this same thought is also suggested. It seems to dart upward with a sudden determination to be happy, and utters a joyous note, when it falls on its wings as if its sorrow was getting the best of its light heart, but again taking courage it rises with another happy note, and remembering it was on a particular errand suddenly turns and darts off to some thistle top where it sits a minute rocking to and fro in the breeze before setting to work at it's morning meal, or gathering the downy thistle blows for the lining of it's dainty nest. W. S. J.

MAY CONTEST.

Seventy-three Judges.

1. Scenes from the Life of Alexander Wilson, 389.

2. My Broadwings of '92 and '93, 231.

3. A Collecting Trip in North Dakota, 143.

4. A Pair of Bubos at Home, 141.

5. Wilson's Snipe, 102.

The Judges' prizes were awarded as follows:

1. No. 47—R. P. Gillespie, Starkville, Miss. Exact.

2. No. 59—H. L. Heaton, Oberlin, Kans., 1, 2, 4, 3, 5.

3. No. 52—Raymond C. Osburn, Vanatta, Ohio, 1, 2, 3, 5, 4.

4. No. 11—H. W. Kerr, Omaha, Neb., 1, 2, 5, 4, 3.

5. No. 15—H. J. Giddings, Sabula, Iowa, 1, 2, 5, 4, 3.

The following Judges named the winning articles in exactly the same order as No's 11 and 15—hence we award each a fifth prize.

No. 16—Millard Van Wagner, Gretna, N. Y.

No. 36—W. A. Achilles, Austin, Tex.

No. 39—Hevey Smith, Smith's Ferry, Ohio.

The following also named the winning articles:

No. 1—E. Doolittle, Ohio.

2—J. G. Smith, N. Y.

10—R. McPherson, Mass.

19—J. F. Parkhurst, Ills.

23—F. H. Nutter, Minn.

24—C. Crosby, N. Y.

25—H. L. Bellowe, La.

30—A. H. W. Norton, Tex.

31—C. Irvine, Tex.

32—C. Luther, Ark.

33—A. H. Smith, N. Y.

38—J. E. Houseman, N. W. T.

50—O. J. Westcott, Ills.

60—C. B. Parker, Kans.

62—F. McAllister, Mich.

64—F. C. Beall, Tex.

66—J. M. Hatch, Calif.

All prizes were mailed on June 20.

Collecting for an Aquarium.

Collecting for an aquarium is great sport. Equipped with baskets containing tin pails or preserve jars, a company sets out treasure-seeking. Old clothes must be worn, since sea-water will spoil new ones; and old shoes, for salt water ruins leather, and it is necessary to protect your feet from sharp shells and stones. A slip or two, or even a tumble, amid the slippery, weed-covered rocks, will not matter, but only be provocative of fun and laughter. In addition to your jars or pails, you must be armed with an old table-knife, a hammer, perhaps a chisel, and, necessarily, with a dip-net made of mosquito netting or some loosely woven material. Children are the best collectors. They have not the same instinctive dread of wetting their feet or hands that older people have. Extreme low tide is by all odds the best time to go hunting. "As soon as you reach the beach, wade right in to your work; look under the stones, scoop up with your net the sand or mud from the bottom of the pools left by the tide, examine every promising-looking bunch of sea-weed, and before the tide comes in you will have material enough to stock forty aquariums. When your hunt is over, sort your specimens, discard all weak and sickly animals, and put the healthy ones in flat earthenware dishes filled with sea-water, where they can be examined at leisure, and the proper ones taken out and put into tin pails with perforated lids, along with salt water and sea-weeds, to be carried home for the aquarium."—From "*Ocean Life in Inland Seas*:" *Demorest's Magazine* for July.

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VOL. XI. NO. 8.

ALBION, N. Y., AUG., 1894.

WHOLE No. 106

Wants, Exchanges, and For Sales.

Brief special announcements, "Wants," "Exchanges," "For Sales," inserted in this department for 50c per 35 words. Notices over 35 words, charged at the rate of one cent per each additional word. No notice inserted for less than 50c. Terms, cash with order.

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Albion, N. Y.

THE OÖLOGIST.

VOL. XI. NO. 8.

ALBION, N. Y., AUG., 1894

WHOLE NO. 106

Nesting of the Western Gull.

The Western Gull, or as it is sometimes called, the Western Herring Gull, is a very abundant resident on this section of the Pacific coast, half way between San Francisco and San Diego, and so far as I know is the only Gull permanently remaining here, although we see others during the summer.

There is one very wild section of coast not far from here where I had often been told that the Gulls could be seen nesting on islands not more than a stone's throw away, but that it was impossible to reach them. Before this season I had not been able to visit this locality, but this year luck favored me and I was camped with a party of surveyor friends not more than eight or nine miles from it. I was not idle here and possessed myself of a set of ten California Quail and a rotten single Marsh Hawk, and also discovered Bank Swallows nesting in large numbers, though most of the nests contained young or badly incubated eggs.

On the morning of June 1st I at last started out with a friend on a trip for Gull's eggs. For the first two miles we had hard pulling through dry sand, but soon we struck better roads, which led through a bench about a quarter of a mile wide between the mountains and cliffs. After about four miles of this we began to see the islands, which are caused in a peculiar way; the ocean has cut channels into the land leaving islands about forty feet above the beaches on the same level as the surface of the mainland. At the bottom they are composed of a soft rock (as also are the cliffs of the mainland) which makes climbing almost impossible, and furnishes nesting places for large numbers of Cormorants. At the top the islands

are of dirt with grass growing on it and the Gulls may be seen on almost all of them sitting on their nests.

We discovered a colony of five or six Baird's Cormorants nesting on the cliffs and went to cut a pole to get some, and while passing a projecting point of the mainland that ran out into the beach we noticed a ladder stuck across the mouth of a cave that ran into the point. With the pole which we got, a small bag and a piece of wire from a convenient fence, we procured two sets of three each of Baird's Cormorant. These birds are easily distinguished by their conspicuous white flank patches and by the small size of the eggs. The eggs are lined with green and covered with a lime coating which shows blue in thin places. They often lay four eggs, but all the nests I saw that day contained three, and the ones I got were incubated slightly; I find the measurements to average 2.20×1.42 . The fishermen call Cormorants, *Shags*, and I believe that more than one species nest here, possibly not on the cliffs as Baird's prefers to do, but on a certain large rock in San Luis Bay which I have in mind and intend to investigate as soon as possible.

We now concluded to see about that ladder. After a tough scramble and slide we reached the rocky beach and found the ladder of which we had seen the end laid about four feet high across the cave, each end being placed in a hole to keep it from being washed away. Not more than twenty feet away across the narrow beach was an island from the top of which dangled a piece of rawhide rope reaching half way down. The ladder was a piece of scantling about twenty-five feet long with strips nailed across it. By setting the ladder at the foot of the cliff it

rested in a natural gully in the side of the cliff and was kept steady. From the top of the ladder we could reach the rope and with the help of an occasional toe-hold got to the top. Here we found the object of our search—two sets of three Western Gull and two of two each besides leaving several singles, the nests were excavated in the dirt several inches and made of grass, weed stalks and sea-grass not very deeply cupped, although when seen from a little distance the Gulls sitting on the nests are half hidden. There were some new nests not yet laid in and some old ones not occupied, so that it would seem that they do not, as Davie states, always use the same nest from year to year. This might be different, however, where the nest is placed on a rock, and I have known a single Gull to nest on small rock (in the surf and impossible to get at) every year for several years past.

The uniformity in shape and coloring between eggs of the same set is something remarkable.

Set 1. Slightly incubated. All the eggs of this set are of a light neutral ground color, less thickly spotted with dark brown than any of the other sets. The spots are rounder and not so much in the shape of blotches. In shape they are rounder at the large end and more pointed. All the eggs have dark shell markings. 2.76x2.03, 2.78x1.97, 2.81x2.05.

Set 2. Slightly incubated. Olive ground color. Egg 1 has large spots not very thickly distributed; egg 2 has spots and lengthy scrawls; egg 3 has small and thick spots. 2.79x1.91, 2.84x1.87, 2.85x1.93.

Set 3. Not noticeably incubated. Egg 1 has a clear olive ground color with very small and thick spots; egg 2 olive with larger spots and blotches. 2.90x1.96, 2.89x1.91.

Set 4. Not noticeably incubated. Egg 1 is very dark with medium sized

spots; egg 2 is lighter with spots not so thick. 2.83x1.91, 2.86x1.92.

I also find the Pigeon Guillemot nesting here in holes in the sides of cliffs and caves from eight to twenty-five feet above water. Some times the holes are very hard to get into. When robbed the birds will immediately lay again. On May 12th I took a partially incubated set from a hole in a cave and on June 11th another in the same condition. Often two nests will be within two or three feet of each other. The eggs are light green with black spots usually forming a ring around the large end. Often one egg of a set will be of a decided green and the other almost white. A specimen set measures: 2.49x1.70, 2.37x1.64.

Whoever he was, whatever his object, and however he managed to reach the top, the man who made that island accessible has my sincerest gratitude.

N. M. MORAN,
San Luis Obispo, Cal.

The First Day of June, '94.

It seemed a poor day to do anything out of doors. There had been a succession of rainy days, and the sky was just commencing to clear up in a showery, desultory fashion. One minute it would rain, and the next the sun shone bright and uncomfortably warm. But as I could not work such a day I concluded it would be the best chance I might get in a long time to take a collecting trip to a tract of brush and waste land I wished to visit, and so it proved. Therefore I got a friend of mine, who, though he seldom finds a good nest himself, is a great help sometimes in procuring nests in more or less inaccessible positions; gathered up my boxes and other necessary adjuncts and started out.

Of course we laid out our route to include as many favorable places for

birds nests as possible on our way there.

Well, we crossed two meadows, and after resting ourselves on a rail fence to consider the best route to Black Creek, we jumped off the fence into the third meadow. We had hardly struck the ground before a female Bobolink fluttered up from our feet and feigning a broken wing tried to lead us from her nest. An instant's search rewarded us with a set of six finely marked eggs from a slight nest of dead grass placed between two stalks of white-weed. We must have surprised her very much as they are seldom flushed, usually running off the nest and rising at some distance, making their nests hard to locate.

From here we soon reached the Creek. The very first thing I found nests of Yellow Warbler and Catbird, but as my collection comprises as many sets of these as I desire, I left them to the old birds, who were expressing their displeasure at my presence by a great deal of noise, mostly made by the Catbirds. Starting up creek to the west I had gotten about half way to my destination when I flushed a Yellow Warbler from her nest in a small willow, and on looking in from mere curiosity, I noticed something peculiar about the bottom of the nest under the five eggs it contained. On closer inspection I found that the old bird instead of building the usual double nest, to cover up two Cowbird's eggs, had simply relined the nest, an unusual proceeding in my experience, and the lining had settled until half of each egg stuck up in the nest. Certainly a queer looking affair.

From here proceeded on up the creek until we reached the tract I spoke of, a deserted clearing of some 20 acres, overgrown with shrubs, weeds, etc., and close to a forest of like size bordering on the creek. I have found many nice sets here in former years.

We had gone but a short distance when I saw a suspicious looking spot in the top of a thorn bush. It proved to be a shallow nest of rootlets and while we stood looking at the thorns a male Rose-breasted Grosbeak flew over our heads with a warning call to his mate. She, however, did not appear. We finally succeeded in getting the nest down whole and found four fresh eggs. The ground color was the lightest I have ever seen. In fact, they looked much like the eggs of the western Black-headed Grosbeak.

A little way further and I heard a rustle as a Wilson's Thrush darted from under me and flitted into a thicket. Having had some experience with this bird before, I did not step around looking for the nest. I staid in my tracks and searched the ground and weeds under me until I found the nest, placed between two small shrubs, some ten inches above the ground and well concealed under weeds. It is nearly always that way with this bird. If you take a single step after flushing the bird you may put your foot right on the nest, they let you get so close.

I found two other nests this same day one of them under exactly the same circumstances and in a similar situation; the other was on the end of a branch growing over a puddle of water and I stepped on the other end. Of course she didn't wait for me to get any nearer. All contained four eggs and incubation commenced. It is the first of the Thrushes to nest here.

I now began to search for Redstarts' nests which I had found here on previous trips. Suddenly I heard my friend exclaim, "Oh! what's that?" I found him gazing on a female Chestnut-sided Warbler sitting on the nest, in a small maple about three feet high. On scaring her from the nest I got a set of three fresh eggs. If I could have left them another day, I would probably have got another egg. A few min-

utes later I found another nest of this species. It was in a sapling some eight feet high, and as there was nothing near by stout enough to hold me I had to cut down the sapling, when I found the nest to contain two eggs of the Warbler and one of the Cowbird. This is the only place near here where I have found this Warbler breeding. In 1891 I took a set of three with Cowbird near where I found my second nest on this trip.

We now moved closer to the edge of the forest where my friend and I, each found a nest and four eggs of the Am. Redstart within five minutes. Both nests were built near the ground in saplings, and incubation was just commenced. Soon after we found another nest just ready for the eggs.

On going into the forest a little way I secured three eggs of the Red-eyed Vireo from a beautiful nest hung on under side of a horizontal beech limb. The nests of this bird are common there, but, on account of the Cowbird, many are deserted. I once found a nest containing four eggs laid, I should judge, by the coloration, by as many Cowbirds. Am glad to say the bird was not sitting on them. It is safe to assume that she had at least one Cowbird's egg in her other nest.

After leaving a nest of the Indigo Bunting, which contained no eggs as yet, we went back into the clearing where I found an incomplete set of two eggs of the Oven-bird. Nest a neat, arched structure of grass-stems, rootlets, etc, buried half way in the dead leaves. The eggs were beauties and was sorry I did not get a full set. Near here I found a space where a number of thorn bushes grew, and Catbirds were nesting in abundance. Nests with four and five eggs, probably much incubated, being found on every hand. Taking one extra fine set of four we concluded that, as we were soaked through by the wet leaves and grass, and it was already

past noon, we would start for dinner, which I ate at 2 p. m., six hours from the time we started. After dinner I spent a busy afternoon getting my specimens in shape for the cabinet, though, fortunately none were badly incubated. This is my first record for the Oven-bird though I have known that it nested here for a long while back.

Two weeks later I found my third nest of Hermit Thrush, identification positive. It contained two eggs of the Thrush and one of the Cowbird. The bird was sitting on the nest and staid close by while I packed the eggs. Nest composed almost entirely of dead leaves with a few strips of grape-vine bark and placed in sapling three feet from ground.

EARNEST H. SHORT,
Chili, N. Y.

Fox vs. Crows.

Seeing the article of Fox vs. Crows in the July number of the OÖLOGIST reminds me of a similar instance that I witnessed March 25th, 1893. There were a large number of Crows after a Red Fox. The Fox sneaked along and hid under every log it came to. Every time the Fox showed itself the Crows would dive at it, and set up a great hubbub, the Fox soon saw me and ran, and the Crows followed for a little distance. Crows will follow Hawks, Owls or Eagles on every occasion, especially Owls, but this is the only instance I know of their fighting a Fox.

R. B. SIMPSON,
Warren, Penna.

Chas. K. Reed, of Worcester, Mass., has gone to Greeland with an exploration party, and is now hovering about the North Pole, securing a fine series of Walrus, Esquimaux and Polar Bear for the holiday trade.—It's needless to add that all will be artistically displayed under the Oval Convex Glass Shades.

Nesting Habits of the Killdeer.

BY DIDYMUS.

The Killdeer Plover arrives in Southern Michigan in March generally, but sometimes it is seen or heard in February. It is also not rarely seen in December, but as a rule the birds are only here in numbers a little over eight months in the year.

This familiar and well known bird is quite generally a favorite and there are few persons in the country who are not acquainted with it. The Killdeer is rarely seen on high and sandy soil, excepting during migrations, at which time the flying birds pass over all sections, and always make their presence known by their vociferous notes. In selecting a summer home its wants are quite different from the other small waders. Not liking the grassy sections like the Spotted Sandpiper, it selects more open spots and nothing seems as acceptable as a low moist stubble field or a shelving gravelly spot near a marsh. The Killdeer is rarely or never found in fields well covered with thick grass, nor is it much given to haunting the shores of ponds and lakes during nesting, although often found there later in the season.

I believe this Plover usually begins nesting in early May, but often the eggs are laid by April fifteenth or earlier, and I should not be greatly surprised to find a set of eggs in March some early season. Again the eggs are found in June and these finds are not second nestings, as it is not thought that the waders rear second broods, but it is quite probable that the birds have been broken up in housekeeping the first time.

A few notes taken at random from my observations may be of interest to your readers: March 15, 1873—Saw several; the snow has not yet gone. May 27, 1874—Found three little birds

about four days old. March 9, 1878—First seen this season. June 27, 1877—Four eggs incubated about a week. May 8, 1879—Found two young four to six days old. May 25, 1879—A friend took four fresh eggs in a corn field. April 1, 1885—Observed first one. The snow is still three feet deep in places, and it is a very backward spring. June 1, 1882—Heard one at midnight when it is raining hard; why is it migrating now?

The Killdeer usually migrates at night; in fact all of the smaller waders do, and I am not sure that this time is not selected by nearly or quite all species of birds, excepting perhaps the geese at times, and the seed-eaters, as the Northern Grosbeaks and Crossbills, which move about in winter. But of the birds which pass north in the spring, I believe that all move at night generally with the exception of the Hawk, Wild Pigeon, Turtle Dove, Kingfisher and Swallow. Often, when in the country, I have heard the lively notes of this bird in the dead of night, and have known it to fly over the city in its ramblings. In July, August and September it is not rare to hear this bird as it feeds on the shores of lakes at all hours of the night at favorable times.

In the spring migration, this species, like others of the small waders, strangely enough, selects cloudy nights for its movements. At least this is nearly always so, if we are to judge from the notes, our only means of observation. One rarely hears a note from a Killdeer, Snipe or Sandpiper if the moon is shining during migrations, whereas a cloudy night in late April is always marked for its many notes of these waders in the air.

The birds having mated, or going through all the appearance of mating after much demonstration, select a site for their eggs. I think that most birds of this size and larger, are mated for

all time, and are therefore solid with their partners; still there is the same amount of courting each season, even among birds which have nested regularly in the same locality for years.

Perhaps as the birds have no nests to build they make up in courting the usual time spent by other birds in nest-building. At last a slight hollow being chosen, four eggs are laid on the bare ground. Not the slightest evidence of preparation is shown, although some collectors claim that the hollow is scraped out by the birds.

The eggs, four in number, are markedly pyriform, and are invariably laid with the four smaller ends together in the center of the slight depression. This arrangement of the Killdeer's eggs is a custom adopted by all the representatives of the Snipe and Plover families so far as I know. It is for a purpose and the position is to meet the requirements of the incubating bird. The eggs of all these birds are proportionately exceedingly large for the size of the bird, and the arrangement undoubtedly serves a purpose. It is hardly fair to say that instinct assists the bird in the arrangement of its eggs, and I prefer to admit that the bird reasons. At least I am satisfied that this is the case. For if the eggs are displaced in the depression it will be found that they have been rearranged in some instances by the bird within a few hours.

It is impossible to offer a solution to this problem, if we may call it so, unless, suggested that it is a wise provision, governed by wise ruling power, which so ordains the arrangement which best admits of the bird's covering them thoroughly.

It is fair to doubt if the Killdeer or any other of this order of birds could properly cover the four eggs if they were arranged in any other position than that in which they are found, with the four smaller ends in the cen-

ter. These birds have proportionately small bodies and are not provided with loose, fluffy feathers, so well supplied to the grouse and other birds which lay many eggs. With the Killdeer the bared abdomen fits down into the group of four eggs, and the heat, so essential, is equally distributed. It is safe to say that by no possible means in the power of the bird could the fifth egg be hatched.

It is a very easy matter to find the neighborhood of a nest, for a pair of birds will attempt to draw off a collector before he is within forty rods of the exact spot. In fact I have sometimes found it difficult to locate the field in which the nest was situated. Often in neighborhoods where strollers are common, and the dangers of annoyance greater, a pair of nesting birds will attempt to decoy a collector long before he reaches the field. I have often had a bird or a pair use their powers of allurements on me when I was still quite one hundred rods from the nest.

These efforts not rarely succeed even with advanced collectors, for the collector thinks that he knows where to look. But he doesn't and will eventually find that the best means of discovering the nest is by carefully watching the birds after they have given over their deceiving movements.

A favorite location for the eggs is on a gravelly ridge in an open field. Or again in a cultivated, often a corn field. The eggs are very difficult to find as their spotted appearance lends an additional means of concealment, and it is to be doubted if a nest would be found if the birds did not assist. But the vociferations of a pair are so marked when a nest is approached closely that the scent is rarely mistaken.

Though gregarious in spring and autumn, the Killdeer rarely, if ever, breeds in colonies. I have never seen an instance of the kind and have only once recorded two nests in a field.

The young are beautiful little puffs of down, and are so characteristically marked that their parentage is at once suggested at sight. Within a day or two the young leave their home in the hollow and quickly lose their reckoning and within a week can run about the fields and can elude any but a determined follower.

In the late summer and fall the families of birds, from four to six, may be seen feeding together on the marshes, low fields and borders of lakes and ponds.

The Thrasher's Song.

The ears of a pedestrian wandering among the wooded hills and valleys of Southern California, will suddenly be greeted with the loud clear notes of a hidden songster. If he be inclined to notice these manifestations of rural life, his attention will be attracted by this melody, and he will desire to see the author of it. Upon approaching the hiding place of the minstrel, the song will abruptly cease and the observer may catch a glimpse of a drab colored bird as it flies hastily from the thickly foliaged tree in which it was secreted.

If the wanderer is accustomed to the habits of the California Thrasher, for this is the bird he is endeavoring to discover, he will remain quietly where he is lest his movements will disturb the other songsters of the locality, and soon the song will burst forth anew from a different quarter. Presently this song is answered by another bird, and then another, until several of these sweet woodland musicians are engaged in a generous rivalry of song in which the participants become so absorbed that the presence of an intruder is not noticed. Now the observer may venture to approach one of the songsters. The grass-carpeted ground so deadens the tread that he may steal noiselessly up behind an intervening

shrub and through its foliage catch a sight of the Thrasher pouring forth his sweet song from the topmost limb of a neighboring tree.

The Thrashers frequent the wooded hillsides and valleys of the coast region of the southern part of the state of California, and are especially abundant in the vicinity of Santa Barbara. Here the grassy sides of the hills are covered with clumps of trees, the intervals between being occupied by patches of shrubs and plots of flowers. Here also occur giant live oaks which lift their leafy canopies high above the earth and throw the ground below into a dense shade into which the light scarcely penetrates. Yet these shady retreats are overgrown with a dense mass of herbage, and wherever the light enters the vegetation grows in rank profusion.

It would be difficult to find a spot more conducive to bird life. The trees above are alive with arboreal birds, every field and open upland teems with the more terrestrial while about the shaded pools of the small streams and over the bosom of the mild Pacific hover numbers of the aquatic.

During the spring these places are the scenes of great activity. The air resounds with the varied strains of the feathered songsters. The sweet music, like a river of song, floods the vales and surges through the gorges, its rippling accents breaking far up the sides of the surrounding hills. The wings of sportive creatures glance in the sunshine in every forst opening; the squirrels scurry hither and thither sounding their shrill notes of alarm at any unfamiliar object; numerous gorgeously-hued butterflies flit uncertainly about, a few of the hapless creatures falling victims to the flycatchers; multitudes of bees rove amid the blossoms making the fields murmur with their busy toil; various birds fly about enlivening the scenes with their gay colors and delightful songs, a *Phainopepla*

passing by in its erratic course makes the woods ring with its sweet bell-like notes, a Goldfinch in undulating flight festoons the ether with its plaintive song, a group of Vultures sail silently over the land, while an occasional Red-tail mounting the stairway of flight, rises to a dizzy height to pursue its solitary course among the clouds.

Prominent among the tenants of these happy scenes is the California Thrasher, the minstrel of our groves. Unlike the Mocking-bird the Thrasher has acquired no love for the habitations of man. It delights in the quiet retreats of the country, where only an occasional ear catches its joyous strains. Balanced upon some swaying twig, it floods the neighborhood with its notes, often pausing in the midst of its song to arrange its feathers. This song consists of imitations of the notes of other birds, boldly and quite accurately rendered, ingeniously interwoven among strains of its own, and all is given with a zest that thrills the listener and makes the Thrasher an element of beauty in our rural districts.

The Thrasher is accustomed to sing at almost any hour of the day, but its sweetest efforts are heard during the cool hours of morning and of evening. Its morning song, the first sound that breaks upon the quiet vales, heralds the approach of day to the drowsy tenants of the woods. While a purple mist still surmounts the distant mountains, the Thrasher seeks some elevated station where the first beams of the rising sun may bathe its plumage, soon in the east the loftiest streaks are crowned with a halo of golden light, the purple veil gradually slips from the mountain's brow, and finally the glorious king of day swells above the horizon, gladdening the sleeping world below with his kindly light. The fields kissed by the morning breeze, feel the pulsations of life, each stalk bows a gracious good-morning to its fellows; the flowers

bursting from their night's repose freight the early gale with their fragrance; the fresh leaves of the overhanging foliage show their loveliest green, while in every shaded nook delicate ferns sparkle with dewy gems.

Meanwhile the song of the Thrasher has reverberated among the hills and dales. The woodland minstrels are now astir greeting the dawn with their joyous lays. The Thrasher from his point of vantage rejoices in the light and warmth shed about him and his song grows into an ecstasy of melody as he leads the rural choirs. The woods and fields resound with the joyous music of these feathered orchestras:

"While Earth's full heart is throbbing
over
With its wealth of life and light and
joy."

The cool hours of morning pass away and the mid-day glare drives the festive choristers to the shady nooks. The woods and fields are now comparatively silent, only an occasional song stirring the heated atmosphere. The sun passes the zenith, traverses the western hills and finally sinks to rest. Night, cowed in dusky robes from the Orient, creeps along every glimmering stream, over the hills and uplands, and across the verdant valleys, wrapping every mountain, vale and cliff in the darkness and the hush of her gloom:

"Twilight's gray and pensive hour
Brings the low breeze and shuts the
flower."

The fields and tree-tops gleam in the soft moonlight, the silvery beams find their way through the openings in the groves, illuminating every little glade and dancing along every murmuring stream, all is quiet save the melancholy cry of the Whip-poor-will, or the hoot of the distant lonely Owl. Suddenly a sweet harmony breaks upon the ear, floating upon the fragrant breeze and keeping time with the soft rustling of

the leaves. It is the Thrasher's evening lay: softened by distance and sweetened by the hush of night. It seems that the fall of darkness affects the birds as it affects us. In the morning their song is the joyous outburst of a glowing spirit, thrilled with the happiness of Earth, but when the shades of night gather about them and surround them with darkness and helplessness their voices appeal with incomparable sweetness to that Guardian who notes even the fall of a sparrow, in a song touched with sympathy, tempered with reverence and hallowed with love.

"Sweeter far that melting voice
Than all which through the day rejoice,
And still shall bard and wanderer love
The twilight-music of the grove."

HARRY C. LILLIE.

Notes From Audubon's Biography.

PART III.

After a very pleasant visit in Frances Audubon and Swainson returned to England, where Audubon spent the winter. In April, 1829, he sailed for America. On reaching his native land, he leaped on shore scoured the woods of the Middle States, and reached Louisiana by the end of November.

Accompanied by his wife he left New Orleans on the 8th of January the year following, and sailing from New York on the first of April, had the pleasure after a short and delightful voyage, of landing safely in Liverpool. On his arrival in London, Audubon was presented by his excellent friend, Mr. J. G. Children, with a diploma from the Royal Society.

Previous to his departure from England on a second visit to the United States, Audubon had the honor of being presented to his Royal Highness the Duke of Sussex, by whom he was favored with a general letter of introduction to the authorities in the British Colonies.

Audubon and his wife sailed on the first of August, 1831, landed at New York, where but a few days were spent, and proceeded to Philadelphia, where Audubon met his old friends, secured a few subscribers, and was presented with more diplomas. Audubon now had two assistants; one from London, Mr. Ward, the other a highly talented Swiss, Mr. George Lehman. At Washington Audubon received from the heads of our Government letters of assistance and protection along the frontier, which it was his purpose to visit. The party, from Washington, proceeded down the broad Chesapeake Bay, reached Norfolk, and boarding another steamer soon arrived at Richmond. Having made the acquaintance several years before of the Governor of Kentucky, Audubon went to him, and was received in a most cordial manner, and furnished with letters of introduction. After the visit to the Governor the party proceeded southward to Charleston, and it was while in this city that Audubon made the acquaintance of the Rev. John Bachman. It was late in the afternoon when they took up their lodgings at Charleston, and being greatly fatigued by their journey, they immediately retired. At the first streak of dawn Audubon and his assistants were already several miles from the city, commencing their search in the fields and woods; and having procured abundance of subjects, both for the scalpel and pencil, they returned home, covered with mud, and so accoutred as to draw the attention of everybody towards them. As the party approached the boarding house Audubon observed a gentleman on horseback close to their door. He looked at our naturalist closely, came up and inquired if he was Audubon, and being answered in the affirmative instantly leaped from the saddle, shook Audubon cordially by the hand, and urged him with his assistants to remove to his house and make

their headquarters there. Dogs, servants and horses were placed at the disposal of the party, and they remained with their kind host during the whole of their stay in Charleston. This was the character of the eminent Dr. Bachman.

From Charleston the party sailed for the Floridas, and after some delay, occasioned by bad weather, put into a harbor near St. Simond's Island, where they were so fortunate as to meet Mr. Thomas B. King, who, after replenishing their store of provisions, subscribed for a copy of the "Birds of America." Soon after they were safely landed at St. Augustine, where they commenced their investigations.

In April, through the influence of letters from the Hon. Lewis M'Lean of the Treasury Department and the prompt assistance of Col. J. Pringle, they went aboard the Revenue Cutter "Marion" at Indiana Key, and were afforded important aid by the Deputy Collector, Mr. Thurston. Having examined every part of the coast, which it was the duty of the commander of the "Marion" to approach, the party returned to Charleston, where they disbanded, Audubon bending his steps eastward, being anxious to keep pace with the birds during their migrations.

At Philadelphia Audubon was joined by his family, and from there went on to Boston. About the middle of August they left their Boston friends and journeyed eastward, and after a prolonged trip came in sight of Moose Island. Leaving Moose Island they went to Dennistown, where they made the acquaintance of the estimable Judge Lincoln and his family. Having decided to explore the provinces of New Brunswick they proceeded to St. Johns, where they were treated in a very kind manner; and ascending the river of that name reached Fredericktown, where a week was spent.

At Fredericktown they embarked in

an old tow-boat bearing the high-sounding title of the "Favorite." As she happened to be the only vessel around she was indeed a "favorite." The old vessel contained men of all descriptions, from the wealthy farmer and land-holder down to the meanest peddler. The "Favorite" was commanded by a person of rude manners and uncouth appearance, on a par however with the surroundings. Two cadaverous looking nags were hitched to the end of a long tow-line, driven by a half-clad negro, who was urging them along at the astonishing speed of some two miles an hour. Gradually they proceeded, until, in the afternoon they landed to exchange their weary "steeds" for others which were in nearly as sorry condition. Audubon and his party espied a house on a near-by hill, surrounded by a group of people, and upon enquiring if dinner could be had, was told by the landlord that it would be utterly out of the question *as an election was being held*. They, however, managed to make out a comfortable meal with what they had brought with them for a lunch. The rotten old tow-line gave way several times after exchanging horses, and once in consequence the commander of the "Favorite" was plunged into the stream. The only result was a good drenching, which the able captain consoled himself for by a volley of oaths, such as only a sailor can articulate. They stopped for the night and the following morning before daybreak started again on their way. Some rapids were reached, and every one glad to assist the old boat leaped ashore and tugged away at the tow-line of the crazy old float. Some miles farther up they passed a rather curious cataract formed by the waters of the Pokioke. There Sambo led his steeds up the steep bank, when, lo! the whole party came tumbling down like so many hogsheads of tobacco rolled from a store-house to the

banks of the Ohio. The man at the steering-oar hoped "the black rascal" had broken his neck, and congratulated himself in the same breath for the safety of his horses, which presently regained their feet. Sambo, however, leaped on the naked back of one, and and, showing his rows of ivory, laughed at his masters curses. After a series of such incidents as these they finally reached Boston.

FRED W. PARKHURST,
(TO BE CONTINUED.)

Nesting of the Whooping Crane.

The Great White or Whooping Crane (*Grus americana*) is one of the wildest and rarest of our large birds. Though the Whooping Cranes are seen passing over in the spring, and one is occasionally taken at that time, and they are said to have been not uncommon and bred here in earlier times, the fact of their occurrence in this vicinity at the present time, was unknown to me until recently.

On May 24th. 1894, a boy offered to sell me two Sandhill Cranes' eggs, which he had found about a week previously. The next Saturday, May 26th, I started out to his place to try and collect some eggs. In the afternoon we started for a marsh, which a pair of White Cranes had frequented all spring. The boy said that quite a number of White Cranes had been seen around there in the early spring, but only one pair had remained over. As we came up over the top of a hill we saw in the middle of a large marsh two white objects, which looked like large rocks, but they began moving, and had evidently seen us as soon as we saw them, for they soon rose up with slow, heavy flaps of their great wings and flew over to the further side of the marsh, where we could see them stalking along with long strides as fast as a man could walk. In fact, when they stood straight up, they

looked almost as tall as a man. Occasionally one would utter a whoop that could be heard for a long distance.

We waded along the whole length of the slough finding some masses which looked like Cranes' nests, but securing nothing but a Grebe's egg, which I dug out of a wet floating mass of rotten vegetation. While wading through the slough we scared up several small flocks of Mallards, Pintails, Blue-winged Teals, and saw Wilson's Phalaropes and Black Terns by the dozen.

When we got near the nest end of the slough, I started to wade down a branch that went off towards the south. I saw several Cranes' nests or muskrat houses, I could not tell which, only a few rods apart. As I stood up on one and look-around I saw two great eggs on the next one.

All this while the two Cranes had been stalking along on the hill quite a ways off, keeping close together, and seemed trying to attract our attention by holding their heads down, dragging one leg, and sometimes spreading their wings. I yelled to the boys to come over, as I had found a Crane's nest. While they were coming up, the Cranes were approaching nearer until they were about twenty rods away. They would stand perfectly still for a minute at a time, with the wings wide-spread and held out from the body, and made a beautiful picture with their graceful snowy-white bodies and great black-tipped wings. On our coming towards them they flew a short distance and lighted again. My companion and I went around in opposite directions to try and get a shot at them, but the Cranes were too wary to be outwitted by such maneuvers and before we could get within forty rods of them they flew up again and lighted over in the slough nearer the nest. My brother, who was sitting on the nest while we sneaked around, said they then came up within about ten rods from him, and would

hop on one leg, stretch out one wing, and try to decoy him after them.

We could see the Cranes far out on the prairie for the hour or two we were around there, and even after we were out of sight we could hear their loud singing whoops. The Whooping Crane's note seems to be louder and has a more ringing and resonant tone than the Sandhill Crane's voice, which has a rougher, rasping sound.

But, let us speak of the nest. It was a mass of grass, rushes and reeds about two feet across and eight or ten inches above the water, which at this place was about a foot and a half deep. The water was open for a few feet around the nest, but in most places was grown up with rushes and saw-grass. The nest was so solid that I sat down on it without sinking it into the water.

The eggs were perfectly fresh. One was a light greenish brown color, spotted quite thickly and evenly over the whole surface with brown and buff spots and purplish shell markings. The ground color of the other egg was of a light brownish color, without a decided greenish tinge, spotted about the same as the first egg, but with many of the spots confluent at the larger end. They measured 4.06x2.38 and 4.03x2.50, respectively.

In comparison with a set of two eggs of the Sandhill Crane, they appear proportionally longer and narrower, and have a somewhat rougher shell with a few elevations on the shell like little pimples.

This nest was found in the marshes along the headwaters of the Iowa river, two or three miles northwest of Hayfield or Madison Junction, Hancock county, Iowa.

RUDOLPH M. ANDERSON,
Forest City, Iowa.

Habits of the American Woodcock in Ashtabula Co., Ohio.

F. C. HUBBARD.

The American Woodcock, *Philohela minor*, is a quite common summer resident, but is rapidly diminishing in numbers, it may be found from March to October.

The Woodcock is one of the most, if not the most highly esteemed of our game birds, may be found at almost any season of the year when the ground is not frozen. The Woodcock during the breeding season frequents the dense woods even hill sides, but in this case in the vicinity of water. After the breeding season they are found in more open wet places, especially at night for their habits are quite nocturnal. Corn-fields, pastures and commons with a rich loamy soil are favorite places of resort after sunset.

The Woodcock once so common in this section of Ohio, are fast diminishing, owing to the draining of our bogs and swampy lands. However, quite a number of these birds breed yearly, and two sets of four eggs each were taken during the season of '94, by collectors in our village. One of the sets I was fortunate enough to purchase of a young man, not a very enthusiastic collector. The eggs were collected by the boy's father four miles from here in the Grand River valley while on a fishing excursion. On May 30, 1890, I found two young Woodcocks nearly large enough to fly and tried my best to raise them, although they would eat insects and worms given them they soon died, probably on account of the lack of nourishing substances not known to me. I have since come to the conclusion that it is better to leave them in their element than to imprison them, even if they can be raised.

When disturbed from the nest or the young are endangered the parent ex-

July OÖLOGIST was the most interesting and instructive of the 14 O. and O. papers I take. Isador S. Trostler, Omaha, Neb.

hibits remarkable sagacity in attracting attention to herself and from the object of her affections, and feigns lameness in limb and wing often leading the observer to a hopeless pursuit.

I was reading an account some time ago of a bird who removed the eggs from her nest on being disturbed, reminds me of an instance where a fellow collector found a nest containing three eggs and wishing to secure the full set of eggs decided to leave them for a day or so. On returning a few days after the eggs were gone, found by some lucky collector so he supposed, but on starting back again he had not gone more than fifteen feet when he again flushed Mrs. Woodcock and secured the full set.

The eggs had been removed by the old bird and placed in a newly constructed nest. This is not always the case with them. On one occasion I found a nest of this bird containing four eggs, I took one of the eggs and on returning a few days after found the bird still occupying the same nest.

The eggs are four in number, gray, speckled and spotted with dark brown; the nest is found with great difficulty.

The Road-runner.

Geococcyx californianus, LESS.

This bird is best known as the Chaparral-Cock in this locality, getting that name from the character of the country which it inhabits. It is veritably a bird of the Chapparal.

In this and adjacent counties it is a common resident but the ravages of the pernicious "Sunday-hunter" are beginning to tell perceptibly in its numbers. They make excellent targets for persons who go out hunting "just to see what I can shoot."

The Paisano, as it is sometimes called, lives upon insects, snakes, eggs, young birds and little chickens. The eggs and

young of Mockingbirds, Sparrows and other birds nesting near the ground, and not having sufficient energy or bravery to defend their homes, from the main food supply of the Road-runner during the breeding season.

Little chicks are considered tender morsels by these birds even though they have to invade the very hen-house to obtain them. Many a chick has met an early death at the hands of an innocent appearing Road-runner, and then had its death credited to some roving coyote or thieving Hawk by its sorrowing owner, while the real culprit goes unharmed, often unsuspected.

A farmer told me not long ago that he had shot one of these birds in the very act of sucking eggs in his chicken-house.

Time and again I have been attracted by the distressed cries of Mockingbirds to where a Road-runner was robbing a nest of eggs or young, only to arrive and see him making off to the Chapparal, sometimes with one or *more* young birds in his bill,—for this bird takes as big a mouthful as he can get, you know.

They have only two notes that I know of, one a loud trill made by snapping the mandibles together several times in quick succession, the other a mournful *coo-ah*, accenting the first syllable. The latter call I have heard only in the late winter and early spring. Doubtless it is a mating call.

The birds are not combative. I have never seen them quarrel either among themselves or with other birds, but on the other hand I have often seen them flee in terror before a pair of Scissor-tail Flycatchers, still it is no disgrace for them to run away from these little spitfires,—even the lordly Red-tail does that.

When a Road-runner is surrounded by a screeching, chattering crowd of Mockingbirds, Cardinals and Sparrows he puts on an air of injured innocence and sits looking calmly upon his little foes

as though totally unconscious of the vile epithets being hurled at him. He is a splendid actor.

Whenever found in the open, they make for the Chapparal, running with head low down and neck stretched forward. If not pursued they will stop every hundred yards or so, and take a look around, then make another spurt, and so on till lost to sight. But if hard pressed they get over the ground amazingly fast with the help of their wings.

Sometimes when caught in a lane and chased the silly birds will keep straight ahead, maybe for a mile, down the lane; then its senses returning, or getting tired of the race, they will turn off to one side into the pastures, where they could have gone directly in the first place.

Early in March nest building begins. Sometimes an old nest is rebuilt, but as the nests are not very stout there is, as a rule, little of the old nest left. Usually the center of a Chapparal thicket is chosen. Sometimes hackberry trees are used, and the "Spanish bayonet" often forms a very secure place for a nest.

The nests are placed from three to ten feet up. Small sticks and thorny twigs loosely put together, form the structure; while the lining, if any, is of grass, weeds, and often the green leaves of the mesquite tree.

The eggs are from two to nine in number, usually two to seven. Six is the average, and nine the largest I have found. The eggs are pure glossy white in color, and ovate, some of them elliptical, in shape. 1.56 x 1.20 inches is an average size, but they vary fully one-tenth of an inch, more or less, than this average. In wet weather the eggs often get beautifully frescoed with mud from the feet of the old bird. These birds always forget to wipe their feet before entering their parlors, and as a consequence the eggs are sometimes perfectly black.

I have taken sets of seven as early as March 18th, and incubated eggs as late as June 25th. Three-fourths of all the eggs of this species that I have collected have been taken in April.

I have noticed in blowing these eggs that some of them have a very peculiar way of "sweating." The watery albumen comes out in little drops all over the egg as though through pores in the shell. Upon examining the specimen in which this sweating was most noticeable with a strong glass I found that the whole shell was perforated with innumerable small holes, hardly visible to the naked eye. I do not know the cause or effect of this, unless it was for ventilation? I have noticed this more or less in a dozen specimens.

Incubation begins as soon as a few eggs are laid, and the laying of eggs also continues, so young birds and nearly fresh eggs are found in the same nest.

When taken before they leave the nest they can be easily tamed but make very troublesome pets. At least, that is my experience. The last Chapparal Cock I had was convicted of sucking eggs, and killed accordingly, death being the penalty for that crime.

A. H. W. NORTON,
San Antonio, Texas.

A Curious Accident.

C. Leonard Whitmire's article in April OÖLOGIST reminds me of a curious accident that came under my notice in '93. A friend while passing a farm house near this city noticed a pair of Chimney Swifts circling around and sometimes flying into a large chimney which supported a lightning rod.

A few minutes afterwards he again passed the house, and looking up saw one of the Swifts impaled and still struggling on the rod.

It had probably, while diving into the chimney, been forced against the sharp point by a sudden gust of wind.

GEO. H. DAVIS,
Painesville, Ohio.

THE OÖLOGIST,

A Monthly Magazine Devoted to
OÖLOGY AND ORNITHOLOGY.

FRANK H. LATTIN, Editor and Publisher.
ALBION, N. Y.

Correspondence and items of interest to the student of Birds, their Nests and Eggs, solicited from all.

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. Articles, Items of Interest and Queries for publication should be forwarded as early in the month as possible.

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The following from F. Warne & Co., Publishers, New York, under date of July 10th is self-explanatory: "As the delay in printing the Royal Natural History was greater than anticipated, and we are thus carried into the heated term, when the absence of so many from their homes, added to the more than usual dullness of the summer season, renders it unadvisable to issue a work of this nature, we have determined to postpone the publication of No. 1 until September 1st, to be followed at regular monthly intervals by the other numbers as announced."

Among the "Boys" who have dropped in during the past few weeks we are pleased to record Neil F. Posson, Ye Old Associate Editor of the OöLOGIST, now of Batavia, N. Y.; Geo. F. Gueff, the popular taxidermist of Brockport, N. Y.; James DeLaney, the well known Conchologist of Ward's Natural Science Establishment, and A. W. Baylis, a young banker whose name is familiar to our readers, from Cedar Rapids, Iowa. Mr. B. caught us right in the midst of dissolution and persisted in "kodaking" us just as we were—the result will certainly prove of ornithological value and Friend B. will undoubtedly label it "A Queer Pair."

Fred D. Snyder and Kirk B. Mathes, whose names and faces are familiar ones to many readers of the OöLOGIST, and who have been with "Lattin" for the past five or six years are looking after L's interests at Chautauqua this season and later will take charge of some of his extensive exhibits at the greater of our Fairs and Expositions.

The readers of the OöLOGIST will note the "Dissolution Notice" which appears on another page—this might perhaps be more appropriately termed a "division" notice—as Mr. Webb takes our entire stock of Eggs, Skins, Minerals, Instruments and Supplies, and a general assortment of Specimens and Curiosities. The undersigned retains the OöLOGIST, the stores and stock at Chautauqua, and a wholesale stock of Shells, Curios and Resort Goods. In the future Mr. Webb will cater for a general trade and endeavor to corral every unprotected collector who is (un)fortunate enough to possess a specimen of the Almighty Dollar, and as he knows the value of the OöLOGIST as an advertising medium his many friends, among its readers, can rest assured, from his announcements, from time to time, that

it would prove a barren field in his locality for moss collecting.

The work of the writer has for the past fifteen or more years been almost exclusively along the line of the Natural Sciences and he decided long ago that his life work should never deviate very far from this path. Whatever form this work may take in future his many friends and patrons can rest assured that he will remain as ever.

Faithfully, FRANK H. LATTIN.

Necrology.

Ford, Walter J., of Joliet, Ill. Aged 19 yrs.

JUNE CONTEST.

Thirty-nine Judges.

1. A Day with the Cooper's Hawks, 139.
2. Notes from Audubon's Biography, 135.
3. The Whip-poor-will, 108.
4. Some Winter Bird-Life, 96.
5. Vireonidae in Iowa, 47.

The Judges' prizes were awarded as follows:

1. No. 28—Arthur P. Simmons, No. 43 Grand St., Troy, N. Y. Exact.
2. No. 5—Chas. H. Dickinson, Grand Rapids, Minn., 2, 1, 3, 4, 5.
3. No. 33—Rogers P. Gillespie, Starkville, Miss., 2, 1, 3, 4, 5.
4. No. 23—J. H. Brown, Davenport, Iowa, 1, 3, 2, 4, 5.
5. No. 4—Ed. Doolittle, Painesville, O., 1, 2, 3, 5, 4.

The following Judges named the winning articles:

- No. 2—R. McPherson, Mass.
- 3—Cyrus Crosby, N. Y.
- 8—F. G. Hargest, N. Y.
- 12—C. Irvine, Tex.
- 21—W. H. Osgood, Calif.
- 24—H. C. Lillie, Calif.
- 27—W. Truitt, Kans.
- 30—D. F. Weeks, Oregon.
- 34—N. G. Van DeWater, N. Y.
- 35—B. A. Garrett, N. Y.
- 39—F. McAllister, Mich.

All prizes were mailed on July 10.

You Are a Judge.

Your decision must be mailed us not later than the *first* day of September. Write on back of a postal card the five articles which you have decided to be the *most valuable, instructive and interesting* in this number of OÖLOGIST and mail to us. Number the articles in the order which you think the prizes should be awarded.

We give our Judges five prizes having an aggregate value of over \$5, one to each of the five whose decisions are nearest the final award of Mss. prizes.

Figures of Importance.

Examine the number following your name on the wrapper of this OÖLOGIST. This number denotes the time when your subscription expires or has expired.

56	signifies	your	subscription	expired	June, 1890
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86	"	"	"	"	Dec "
92	"	"	"	"	June, 1893
98	"	"	"	"	Dec. "
104	"	"	"	"	June 1894
110	"	"	"	"	will expire Dec. "

We are desirous of straightening our subscription books at once and trust our subscribers will send in their subscriptions for '94 including all arrearages, at their earliest conveniences, the amounts necessary to accomplish this are as follows:

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Should you desire to discontinue your subscription to the OÖLOGIST your indebtedness to us is 15 cents less than the above amount. The figures are according to our books July 7, 1894, and many renewals received since that date have been credited on our books, but not on the wrapper.

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As perhaps a great many of the readers of the OÖLOGIST, will remember, during '92 I issued monthly Bulletins of Eggs. During '93, owing to my presence at the World's Fair, they were discontinued, but as I now have a large surplus of many desirable species, I shall on Aug. 1st, issue a new bulletin of Birds eggs, in sets and singles. All desiring to purchase eggs, send stamp for copy of same. I trust I may be favored in the future with the liberal share of your patronage, that I have in the past.

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Albion, N. Y.

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THE OÖLOGIST.

Monthly. 50c. per Year.

VOL. XI. NO. 9.

ALBION, N. Y., SEP., 1894.

WHOLE NO. 107

Wants, Exchanges, and For Sales.

Brief special announcements. "Wants," "Exchanges" "For Sales," inserted in this department for 50c per 35 words. Notices over 35 words, charged at the rate of one cent per each additional word. No notice inserted for less than 50c. Terms, cash with order.

"DEALERS" can use these columns at *Regular Advertising rates, only*.

Strictly First-class specimens will be accepted in payment at one-half list rates.

Exchange Cards and Coupons (subscription) will be accepted for "Wants" and "Exchanges" *only* and according to conditions stated thereon.

TO TRADE.—Students' microscope (40 dia) dissecting set, small pocket rifle (22 cal.), piccolo (13 keyed), old Italian derringer, eggs in sets. Wanted, a clarinet. W. E. WELLS, Granville, Ohio.

FOR EXCHANGE.—Fifty varieties of California eggs in sets for sets of water birds, only, also eggs for stamps. O. W. HOWARD, 553 S. Olive St., Los Angeles, Cal.

FOR SALE.—Coal in three different stages of formation found in the anthracite coal regions for 50 cents. Will exchange for minerals, Indian relics or birds eggs. FRANK EDGAR, 1307 Wyoming Ave., Scranton, Pa.

EXCHANGE.—Kerr & Perham egg tools. Stamps and eggs to exchange for eggs or skins. Send list and get ours. KERR & PERHAM, Sandwich, Ill.

TO EXCHANGE.—A fine collection of 400 postage stamps and a few eggs to exchange for eggs not in my collection. FRED MCALLISTER, Davison, Mich.

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FOR ONLY 50 cents. \$500 Confederate Money (assorted). \$400 Confederate Bond, and 6 rare Arrow Paints. Catalogue 3 cents. J. F. BOWEN, Iuka, Miss. s3t

Please find enclosed 35 cents for a copy of "Standard Catalogue." *I have received so many answers to my ad. in July Oölogist that I need one right quick.* C. F. STONE, Branchport, N. Y.

I REQUIRE more room in my cabinets, so wish to clear out the following single eggs at these low prices: Golden Eagle 3.50, Gray Sea Eagle 1.00, Pigeon Hawk 1.00, Mississippi Kite 1.50, Sharp-shinned Hawk 50, American Goshawk 1.00, Swainson's Hawk 30, Merlin 25, European Buzzard 18, Duck Hawk 1.25, and many others, send for my full list of cheap single eggs. W. RAINE, Bleeker St., Toronto, Can.

OÖLOGISTS Attention.—Send your exchange list of eggs, etc. to me and receive same, 1-5-10 answers get nice present free. G. N. UPHAM, Coffeyville, Kansas.

CLIMBERS.—Pair regular style, strapped ready for use, for best offer 1st class sets with data. HARRY B. SARGENT, 366 W. 116 2d St. New York.

FOR SALE.—Best offer before Sept 15th. 1 set cancelled Columbian stamps complete, 1 set uncanceled Columbian stamps complete, one 45 English, 41 English green and one 41 English brown, cancelled stamps. Address R. SANFORD, Hastings-on-Hudson, N. Y.

PAPIER MACHE.—Needed by all taxidermists and naturalists. Fresh made 20c lb; 8 lbs, 1.50; 20 lbs 3.00. *Virgin Cork Bark* for rock work, all sized pieces same price. Address, WALTER F. WEBB, Albion, N. Y.

WANTED.—October *Nidologist*; *Oölogist* vol. 1 to 7; *O. and O.* vol. 1 to 8; vol. *Auk*; insertion barrel. Have sets and skins, complete data. ROGERS P. GILLESPIE, Starkville, Miss.

WANTED:—For cash or exchange choice sets of Pigeon Hawk, Gyrfalcon, Rough-legged Hawk, Ravens, Amer. Bittern or other rare sets of Hawks and Owls. Lowest price and particulars wanted. W. B. JUDSON, 53 Eldorado St., Pasadena, Cal.

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The article on the "Brown Pelican" in the *Oölogist* several months since has brought me a flood of letters, both as to exchanges and inquiries. Had my article been in the nature of an ad. I should have been highly gratified. As it is, never making exchanges. I must beg of you to make an announcement through your paper to this effect, for I cannot answer all the letters. Morris Gibbs, Kalamazoo, Mich.

FOR EXCHANGE:—A1 sets of 51a, 70, 106, 263, 622a, 710, etc. Many common sets with nests wanted. ORA WILLIS KNIGHT, No. 157 Hammond St., Bangor, Maine.

TO EXCHANGE.—Set of 15 volumes of American Encyclopedia, but little used; size of books 9x6½x2; for best offer. Eggs in sets or ornithological literature. Cones' Key wanted. S. W. HARRIS, Reading Ave., Hillsdale, Mich.

I WILL GIVE A. O. U. No's 325, 488, 216, 477, 546, sets with data, or Vol. I YOUNG OÖLOGIST and Vol. VIII OÖLOGIST. JACOB BASTIAN, JR., Statesville, N. C.

TO EXCHANGE.—An Alto Horn, cost \$14, nearly new, for a Winchester or Stevens rifle in good condition. Address FRANK N. WRIGHT, Virden, Ill.

ANY PERSON sending me \$1 worth of strictly first class sets with data or 60c. cash will receive post free \$1.50 worth of curios, stamps, skins, etc. GEO. D. FRENCH, Ivoryton, Conn.

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FOR SALE.—Bb Tenor Trombone and case, its cost was \$92, has been used one season, in A1 condition. It goes for the best cash offer. All letters answered. F. E. PICKENS, Wilton, Me.

EXCHANGE.—First class sets of California Eggs for a copy Cones' Key and sets of other localities. Send list, receive mine. Common eggs also wanted. CARROLL SCOTT, 463 Fifth St., San Diego, Calif.

WANTED.—Sets of Meadowlark, Flicker, Belted Kingfisher, Purple Martin, Cedarbird, Sparrowhawk, Great Horned and Screech Owls. I also want sets of 7, 12, 29, 63, 64, 77, 80, 106, 118, 126, 127, 131, 140, 141, 144, 160, 184, 190, 204, 206, 214, 218, 228, 263, 273, 286, 289, 294, 294a, 295, 300, 315, 325, 326, 332, 337, 339, 341, 352, 349, 363, 364, 368, 387, 388, 393, 394, 406, 416, 417, 418, 419, 428, 452, 474b, 494, 517, 567, 601, 614, 622a, 624, any Warbler (except 652), 713, 715, 727, and many others, for which I can give rare eggs from North West Canada, Iceland and Lapland, and also exchange 100 eggs of White-faced Glossy Ibis in sets for common species, send your lists of duplicates to W. RAINE, Bleeker st., Toronto, Canada.

FIFTY Illustrations is the *Nidologist's* record for the year just ended. When you consider that almost all of these are *half tones*, from photographs of birds, nests and eggs, you can imagine the value given for only \$1 per year. The August number contains: "Photographing an Owl," (illus) by Dr. R. W. Shufeldt; "Do Wading Birds Swim?" by William Palmer, Smithsonian Institution; "Nesting of the Ashy Pearel on the Farallone" (3 illus) by C. Barlow; "Mimicry of the Woodcock" (illus) by L. Whitney; Watkins; "What Constitutes a set of Eggs;" "Concerning the Price on Certain Eggs," etc., etc. Remember a free exchange notice now to subscribers. No free copies. Sample 10c. H. R. TAYLOR, Editor and Publisher, Alameda, Cal. New York office, ROSS TAYLOR, 150 Fifth Ave.

TO EXCHANGE.—I will give 30 foreign stamps all different for every perfect arrow head, with locality given, sent me. HERBERT DAY, Mt. Vernon, Iowa.

TO EXCHANGE.—About \$5 or \$6 worth of Southern Calif. eggs in sets and singles for collecting pistol or good pair climbing irons. Write for list. A. L. LAPHAM, 120 W. 16th St., Los Angeles, Cal.

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NUMBERS WANTED.—I want back numbers *Nidologist*, 1, 2, 3, 4 and 6. For all of these I will give a year's subscription, for first four, ten months; for any two of above, five months' subscription. Send carefully wrapped, to H. R. TAYLOR, Editor *Nidologist*, Alameda, Calif.

RARE EGGS:—I have just received a shipment of desirable sets of Texan eggs, a few with female parent skin, fully identified, also a few common sets which I will close out at 1/3 "Standard" list prices. First \$2.00 gets a fine American Crow skin free. First \$5.00 order, American Bittern. Satisfaction guaranteed. List for stamp. B. S. BOWDISH, Phelps, N. Y.

COLUMBIAN Stamps.—I offer anything I may have in stock as per catalogue for unused Columbian Stamps of over 10c denomination. Send by registered mail. I can also use any rare stamps listed by Scott at 1.00 or over in exchange. Address, WALTER F. WEBB, Albion, N. Y.

TO EXCHANGE.—A fine collection of eight hundred Foreign Stamps valued at from one to fifty cents each for best offer in specimens or supplies. FRED P. DRONE, 20 Benefit St., Providence, R. I.

NOTICE.—I have two Tax Receipts dated 1903 and 18 2. Also bill of sale of a negro boy dated 1861, will exchange for eggs or skins. F. R. NOBLE, South N. Drug Store, Nashville, Tenn.

FOR EXCHANGE.—Several hundred finely mounted birds, rare skins from Arizona and Lower California and a few rare sets of eggs. Would like skins and eggs in return. Send me a list of what you have to offer. Cash paid for skins and eggs. JAMES P. BABBITT, Taunton, Mass.

MOUNTED BIRDS.—Nine western species at less than value of skins. 50 cents buys a mounted bird on a nice varnished stand. See ad. in this number. F. T. CORLESS, Los Gatos, Calif.

WANTED.—Cones' Key, Ridgeway's Manual, Field glass, traps publications on hunting in the Northwest, eggs and skins. Can offer 36 numbers of Our Living World (cost \$9), also eggs, skins, mounted birds, etc. Also a few well trained ferrets for sale. NATHAN L. DAVIS, Box 224, Brockport, N. Y.

FOR 30 DAYS ONLY.—The following offer holds good until 30 days after the date of this advertisement. For the sum of \$3 I will send the following sets of Birds Eggs. Nos. 12, 13, 22, 27, 53, 60, 123, 135, 164, 211, 242, 304, 312, 378. Eggs sent by express securely packed. Have other eggs for sale very cheap. Send for list. W. L. FOXHALL, Tarboro, N. O.

WANTED.—A quantity of first-class skins of game birds, will offer for same fine rare sets or possibly cash. KIRKE B. MATHES, Albion, N. Y.

WANTED AT ONCE.—"Big Beetles, Small Crabs and Crawfish" in quantities of 100 or over—Must be well dried and prepared and at low rates, either in cash or exchange. FRANK H. LATTIN, Albion, N. Y.

WANTED. U. S. postage stamps except 1c and 2c 1890 and 2c 1893. Will give in exchange eggs in sets, foreign stamps, etc. GEO. W. DEAN, Wick, Ohio.

I HAVE some fine sets of common birds eggs which I will exchange for Stevens rifle in good condition, or second hand bicycle cushion tires. W. L. HART, 116 Lincoln Ave., Canton, Ohio.

WANTED. A good make of bicycle, pneumatic tires and in fine condition. I can offer for same rare and desirable sets or singles, a small amount of cash, books, etc. I will give cash or eggs for Coues' Key latest edition. Address, H. SAYLES, JR., Albene, Texas.

STAMPS.—Great bargains this month in my packets. No. 10 contains 25 used and unused *very fine* price 52c; No. 50, 15 unused 25c; 200 assorted 12c. Approval sheets *a specialty*. Net prices but lowest discount rates, contains only clean, bright, desirable stamps. H. M. GILLET, Lebanon Springs, N. Y.

RARE EGGS IN SETS.—Since the last issue of the OÖLOGIST I have added many choice sets to my already large stock. I can now offer to advanced collectors many of our most showy N. A. species in selected series designed to show all variations. Some of the "New Arrivals" are full sets with data of Western, Holboells, Horned & Amer. Eared Grebe, Loons, Puffins, all obtainable Terns, ditto Gulls, a choice series of Ducks and Geese with the original nests of down, White Ibis, Wood Ibis, and White-faced Glossy, Amer. and Least Bitterns. All Herons and Pelicans, Flamingos, Rails, Coots, Phalaropes. Some Rare Sandpiper, Plovers and Grouse, rare Doves, Hawks, Owls, Eagles and Ravens. Also Hummers. My series of Southern and far north eggs are unequalled. All of above and hundreds of others will be priced low in my September bulletin now out. Send stamp for it at once. Address, WALTER F. WEBB, Albion, N. Y.

FOR SALE.—My large collection of first-class singles with data for sale at 60 per cent. off Standard Catalogue rates. List below. As I have only one single of most of the species, please order soon. Send list of those you desire to purchase and all the eggs you want, that have not already been sold, I will send you on approval. List A. O. U. Nos. 5, 6, 13a, 80, 182, 184, 191, 192, 293, 289, 289b, 293, 376, 318, 319, 320a, 326, 325, 324, 333, 334a, 337, 337a, 339, 340, 345, 346, 348, 360, 362, 368, 369, 365, 374, 375a, 378, 385, 386, 387a, 390, 391, 393, 393b, 406, 410, 412, 414, 420a, 421, 430, 443, 446, 452, 453, 477, 486, 489, 495, 495a, 501, 501a, 503, 504, 506, 508, 513, 552, 552a, 560, 560a, 570, 574a, 576, 581, 586, 587, 591b, 593, 593a, 594, 610, 610a, 611, 619, 622a, 622b, 624, 627, 623a, 643, 648, 652, 657, 659, 633, 702, 703, 704, 705, 706, 717a, 721, 722a, 725, 725a, 735, 761, 761a, 755, 768. Eggs sent postpaid when order amounts to 1.00 or more. I will exchange any of the above singles also a few sets for a self-inking excelsior printing press, chase not less 4½ by 7½, also regular printing type, all kinds of printing material, a good collection of foreign and U. S. stamps, egg and skin cabinet. All answered. Address, H. SAYLES, JR., Albene, Texas.

SALE! Sale! Sale! My collection of eggs in sets with data. It goes cheap to the first party meaning business. W. E. LOUCKS, Peoria, Ills.

PETRIFIED Moss.—Fine specimens 10, 15 and 25c. Petrified leaves, specimens 10, 20 and 30c. ARTHUR B. ROBERTS, Weymouth, Medina Co., Ohio.

My "For Sale" notice in the August OÖLOGIST has doubled its cost many times in returns therefore I am highly pleased. F. C. Elliot, Tallahassee, Fla.

WILL GIVE liberal ex. in foreign *Coleoptera* and *Lepidoptera* named for *Coleoptera* of the South named or unnamed. R. J. WEITH, Elkhart, Ind.

TO EXCHANGE.—Eggs in sets and singles for first class sets, egg calipers or copy of Davie's Key cloth bound. CLARK B. JAMS, Cheyenne, Wyo.

WANTED.—A guitar. Will give good exchange in birds eggs, books and papers, shading pens and inks and other articles. Send for lists, and describe instrument. E. J. BOTS-FORD, Medina, N. Y.

TO EXCHANGE.—1st class eggs in sets and singles of this locality for same of others. Many common eggs wanted. C. G. COMEGYS, Gainesville, Tex.

BARGAINS!—Parties desiring special bargains in eggs, skins, minerals, Indian relics, insects, books, etc., will do well to send stamp for my bargain lists. B. S. BOWDISH, Phelps, N. Y.

WONDERFUL!—For every 25 used Columbian stamps sent me, any kind, I will send in return a beautiful moonstone in its natural state. Persons sending less than 50 stamps please enclose a 2c. stamp, unused. C. M. HATFIELD, Los Angeles, Cal.

FOR SALE.—An Ithaca double barreled shot gun and one Lovell Diamond Safety '93 model. Write for particulars. BERYL HODGE, Sterling, Kans.

I HAVE a 22 cal. Colt's repeating rifle, 1 set of surgeons instruments valued at \$25 also two bird dogs 8 weeks old and 1 pair white ferrets to exchange for North American birds eggs. The other adv. of G. A. Smith's brought about 50 answers which were very satisfactory. W. F. WEISMORE, Oakfield House, Oakfield, N. Y.

TO EXCHANGE following in quantity for quality. 250 first class eggs in sets for same not in my collection. I want Murre, Sea Birds, Hawks, Owls, etc. Send list. JOHN HAMILTON, Box 112, Petersburg, Ill.

FOR SALE or EXCHANGE.—My entire collection of singles, with very full data. Would like sets or books on science, especially ornithology. All answered. FRED W. PARK-HURST, Bath, N. Y.

FINELY prepared California sets with complete data to exchange for desirable sets of Eastern eggs, water birds preferred. I have the following to offer: 385 1-4, 431 n-1, 462 n-3, 466 1-4, 476 1-7, 499 n-3 4-2 3-2-4, 5101 1-2-5, 519 1-4 2-5, 530 n-4 2-4 1-5, 581d 1-3, 591b n-3 2-3 2-4, 599 2n-3 n-4, 612 2-4, 620 n-2, 652 n-3, 733a 1-6, 758 1-3 1-4. All nests subject to recently adopted list of Cooper Orn. Club. Also singles of Farallone Cormorant. Send lists at once. C. BARLOW, Box 135, Santa Clara, Calif.

WANTED.—Ridgeway's Manual, and Nomenclature of Colors. Maynard's Eggs of North American Birds, also strictly first class bird skins. Will give in exchange first class eggs in sets with data. D. A. ATKINSON, Box 44, Wilkensburg, Penna.

JUST returned from collecting trip in North Dakota. Have sets of Canvas-back, Ruddy, Pintail, Redhead, Gadwall, Shoveller, American Goldeneye, B. W. Teal, Western Grebe, Rails, Terns, etc. Send stamps for list of either skins or eggs. Can use Cones' Key in exchange. EDWIN S. BRYANT, Davison, Mich.

FOR SALE at half price or Exchange.—Clean and carefully prepared sets of California Murre, Laughing Gull, Gull-billed Tern, Cabots Tern, Forsters Tern, Common Tern, Black Skimmer, Florida Cormorant, Brown Pelican, Great Blue Heron, Green Heron, Black-crowned N. Heron, Limpkin, Clapper Rail, Wilson's Plover, Chestnut bellied Scaled Partridge, Chachalaca, White-winged Dove, Mexican Ground Dove, Western Nighthawk, Texan Nighthawk, Fish Crow, Red-winged Blackbird, Seaside Sparrow, Texas Sparrow, Cardinal, Sharpe's Seed-eater, Barn Swallow, Red-eyed Vireo, Yellow Warbler, Yellow-breasted Chat, Catbird, Brown Thrasher, Curve-billed Thrasher, Long-billed Marsh Wren. S. ROZYCKI, 2017 G. St., N. W., Washington, D. C.

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THE OÖLOGIST.

VOL. XI. NO. 9.

ALBION, N. Y., SEPT., 1894.

WHOLE NO. 107

Nesting Habits of the Hooded Warbler.

This Warbler is quite common certain seasons in Michigan and may be found nesting in all sections where it remains. However, like many other species of birds, more particularly the Warblers, it is variable in its choice of location. Sometimes it is found quite abundant during May and June, and again in the same locality is noted only with great difficulty.

It arrives May first or later, and one season I did not observe a bird until May 14, although the birds soon became abundant after this date and nested in the locality. It is one of our shyest birds and to the ordinary collector will remain unknown, although perhaps abundant in the neighborhood. For this reason we often see collections of skins with a single specimen, and the owner claims that the species is rare, whereas the Warbler has been simply overlooked.

The Hooded Warbler, *Sylvania mitrata* (Gmel.), usually arrives on the southern boundary of Michigan, about forty-two degrees north latitude, during the first week in May. Nearly all the birds pass further north, so it is largely transient in this neighborhood. Nevertheless the nests may be taken by careful observers each season.

I think that the birds rarely sing during migration and only become musical after settling for the summer. I have heard the pleasing song-notes in the second week in May and later, although a sharp and characteristic call-note may be given at any time.

This is one of those Warblers, who, from their very shyness will remain unknown, if the collector does not familiarize himself with the song. How

often one meets collectors who call themselves thorough naturalists, who know next to nothing regarding birds' songs and habits. There are unfortunately far too many who think that the whole business, science and pleasure is summed up in simply robbing nests and adding to the stock of eggs.

When I stroll with a companion, the opinion I form of his qualifications is largely due to his ability to identify birds on the wing, or by the notes, or if he can offer some notes of interest on some species. I am but little interested in long accounts of big climbs and large collections. I have met men and boys who did not collect, whose knowledge of birds' habits made them much more companionable than those who could simply brag of their powers as collectors. I cannot imagine a less interesting person than the egg-crank who knows dothing of nature, and who thinks that robbing birds' nests is the *ultima thule* of the science of nest-hunting.

The Hooded Flycatching Warbler has three distinct songs, two of which are commonly uttered during courting and nesting, and when these songs are heard one may rest assured that the birds are nesting or will nest in the woods.

It is extremely difficult to get a view of this species when it is singing and I made many unsuccessful efforts before success followed. The singer keeps in the underbrush and flits from bush to bush keeping out of sight most persistently.

When a strange song is heard in wood or field a collector should always search out the performer, and in this way notes and nests of rare species may be taken, or it may be that some

unknown song will prove to come from a common bird which we have known for years.

As usual, the first nest discovered, May 27, '76, was found by accident on a hill in a beech and maple woods about two miles north of Kalamazoo. The nest was in a small beech bush and was placed in a trifid fork at about thirty inches above the ground. There was an abundance of undergrowth all about and the place was retired and seldom visited.

I knew at once that the find was new to me, and as I had not seen the old bird leave the nest, took my bearings and left the two treasures, with one of the Cowbird, to return for a full set and complete identification later.

Two days afterward the spot was again visited and the crawl to the nest through the bushes was so carefully made that I was permitted to view the female setting and also to see the male near.

As there were still but two Warbler eggs they were appropriated. The nest was largely composed of bleached maple leaves of the previous year. These leaves, showing almost white on the sides and bottom, gave a very pleasing appearance to the structure. The interior was lined with fine roots and grape vine bark. Altogether it was a very clever piece of bird architecture and was compact, and moreover was quite unique, as I have seen no other nests which closely resembled it. Across the top it measured slightly over four inches, four high externally, while the internal measurements were two and a half inches each.

On May 31 I found another nest and also two others on June 6th and 9th of the same year, 1876. Two of the nests contained three slightly incubated eggs each. One nest held a single egg which I was foolish enough to take with the nest, thinking that the locality was too distant to revisit, and that the

species had become abundant for all time.

The first and second nests were found in the same patch of woods. I also found another, a fifth nest vacant in these woods, and waited a week and then beheld a Baltimore Oriole's egg in it. * A fifth nest was discovered in a spruce bush, *Lindera benzoin*, in a low piece of wet woods of basswood, ash and elm. The structure was entirely different from the others, all of which were placed in beech or maple bushes from two to four feet up and in beech and maple forests.

The eggs which I took varied in length from .71 to .74 and in smallest diameter from .53 to .58 of an inch. The eggs are white with a greater or less number of spots of red principally at the larger end where they often form a ring, but sometimes scantily over the entire surface. In some eggs there are small blackish dots in the wreaths of the larger ends,

In the years '77 to '85 I found this species common and musical in May and June in various parts of the state but was generally engaged with other birds so that I did not find time to look up the nests. The species is abundant in St. John, Ottawa, Kent, Van Buren and Montcalm counties.

This Warbler has very agreeable notes, and the song is so well marked, that when noted by an observer of bird notes, he has no trouble in identifying the songster. If a Hooded Warbler is heard singing there will be no uncertainty in predicting that there is or will be a nest in that immediate neighborhood.

The birds are never taken in fields and rarely seen in half-wooded places. Their choice seems to be heavy forests with a thick growth of bushes. During migration I have shot this Warbler in

* This singular find occurred a day or so after a severe storm. Perhaps the Oriole lost its own nest and made use of this empty one.

high trees, and it, like other members of the family, migrates largely at night. One was brought to me which had been killed at night by flying against the electric light in the city.

After July 1st it is unusual to see a specimen as they are so careful to conceal their movements. I know nothing about the time of their departure. This is an elegant bird; vivacious and most-interesting.

MORRIS GIBBS.

Oölogy vs. Philately.

I am going to give the definitions of Oölogy and Philately, so as to illustrate that stamp collecting is simply collecting and amassing bits of paper, and Oölogy is the collecting and studying of something higher, but shall look to a more correct authority (on these special subjects) than Webster, and for Oölogy I know of no better definition than given by "Eugene Pericles" in his admirable article in the December OöLOGIST, which is as follows: "Oölogy is a branch of Ornithölogy." And he goes on to state the difference between the true and the sham study, etc., (you should read the piece) and may I add to his definition, a most interesting manner of studying Nature and her feathered creatures.

Philately, as defined by the Century Dictionary, is the fancy for collecting and classifying postage stamps and revenue stamps as objects of curiosity; also the occupation of making such collection. The above definitions are acknowledged to be correct by the best authorities on such subjects.

Oölogy may not be a great and glorious occupation; it may not entitle anyone to very great praise and distinction who have followed it as long and devotedly as I have; but the true pleasure, the pleasant moments and exhilaration amply pay me for any praise or distinction that I may have lost by my

study of Nature, her birds and their eggs. Oölogy is an education itself. All true Oölogists are close observers of what goes on around and about them, acute observers of nice distinctions, careful observers of things that are rare and all these insensibly inculcates habits of study, which are in themselves of immense value. And boys, they are requisites of a successful business man. And everyone will admit upon reflection that it has developed faculties within himself that have aided and influenced his after life. I am, therefore, a warm advocate of the study of Oölogy. The devotees are not in as many numbers as those of Philately. The latter number over one million. We are, however, brave and true in spirit.

Philately is simply a fancy for collecting, this is acknowledged by their best writers, and is not a deep love as in Oölogy. It is engaged in by curious people and not by the careful and studious persons who pursue the study of Oölogy. Philately is easily taken up—as soon dropped—and of very little importance. Stamps are engraved and made by man; but each bird and egg is a fitting representative of Nature's greatness.

Some writers contend that stamp collecting relieves the mind from business and other cares; it does to a certain extent, but as the pastime is pursued indoors, it does not relieve the mind body and soul, give any exercise as tramps in the midst of forests.

If you are a stamp collector, or stand dabbling one hand in Oölogy and the other in Philately, my earnest advice is to exchange or do away with your stamps, even if you have to do it at a sacrifice, for some good well identified eggs to begin a collection, and the study of Oölogy, or if you already have a collection of eggs then add to it.

Also study the birds of your locality, their habits and eggs; keep eyes, ears and note-book open; and last but

not least become a subscriber to the OÖLOGIST.

I really believe that if Philatelists were aware of how I feel and think when collecting and studying our birds and their eggs, stamp dealers would have to go in pursuit of another business. At the out-set it is as well to remind those about to plunge themselves in the most fascinating study and pastime that there is no royal road to Oölogy any more than there is to any other study or amusement.

A question will naturally be asked, why do people collect stamps? simply this, it affords them some pleasure. Nothing more or less. And why do people collect and study birds and their eggs? It affords them not only pleasure, but study, a love of great and glorious things, recreation, exercise and the promotor of all things which tend to make nobler manhood and womanhood.

JOHN H. JACKSON.
El Paso, Tex.

A Beautiful Hummingbird's Nest.

One Sunday while sitting under one of the large cypress trees on the left hand side of a lane, near St. Matthew's school at San Mateo, Cal., I heard a buzzing noise and looking around for a while I discovered a Hummingbird about to alight on a twig some three inches from the ground.

As soon as it had alighted it began to pick little bits of moss from the trunk of the tree. When it had enough it flew across the lane and into a small slippery elm tree where it perched on a branch and began weaving the moss into some hair which laid the foundation for her nest.

Seeing that she returned to the twig to get moss every time, I thought I would play her a trick, so I got some cotton and put it on the ground under the twig and waited to see the result.

She soon came back for more moss and when she saw the cotton she took that.

I now left her knowing that if I bothered her she would destroy her nest.

When I came a few days later I was rewarded with a beautiful white nest and two eggs.

SHERMAN BAGG.

Shapes of Eggs.

Various attempts have been made says *The Scientific American*, to account for the diversity in shape seen in eggs. A recent study convinces Dr. Nicholsky that the difference may be all traced to gravity, and he finds his idea confirmed by all the eggs in the zoölogical collection of the St. Petersburg University. He supposes that pressure by the sides of the ovary tends to elongate the egg before the shell has hardened. In birds which keep a vertical position while at rest, as do the falcon and the owl, the soft egg is made short by the action of the weight of the body against the ovarian pressure; while in birds like the grebe that are nearly always swimming, the egg is lengthened because the bird's weight acts with the compression by the ovary. The egg is made more pointed at one end than at the other in birds that, like the guillemot, are frequently changing their position—sometimes swimming and diving, sometimes perching on the rocks, etc.

Western New York Naturalists' Association.

The annual meeting of the Western New York Naturalists' Association will be held in Brockport, Thursday, October 4th. All persons interested in Natural Science are invited to be present at the evening session which will be devoted to the reading and discussion of scientific papers, and exhibition of collections.

For particulars address,
GEO. F. GUELF, Sec'y.
Brockport, N. Y.

Notes From Audubon's Biography.

PART IV.

Soon after the arrival of Audubon's party in Boston Audubon's son, Victor Gifford Audubon, sailed for England to superintend the publication of the "Birds of America;" while Audubon resumed his researches. At Boston Audubon was attacked by a severe illness, but, "thanks to Providence and his medical friends Parkman, Shattuck, and Warren," he was soon enabled to proceed with his labors. A sedentary life being the cause of his sickness, Audubon resolved to set out once more with his note-book and gun; and desiring to explore the bleak wilds of Labrador, he returned eastward with his youngest son, John Woodhouse Audubon, and soon after was joined by four young gentlemen, all fond of Natural History, among whom was Thomas Lincoln, the son of Audubon's old friend, Judge Lincoln of Dennisville.

At Eastport, Maine, Audubon and his little exploring party chartered a beautiful little vessel, the "Ripley," under the command of Mr. Henry W. Emmerly. On the day appointed for the departure of the party the wharf was crowded with their friends and acquaintances who had come to see them off; and they were most of them agreeably surprised when as the stars and stripes shot to the masthead, a salute was fired from the guns of the fort which towered over the bay on which the beautiful "Ripley" lay at anchor. As they passed the Revenue Cutter at anchor her brave captain paid them a similar honor, after which he came on board the "Ripley" and piloted the party through a very difficult outlet.

The next day, favored by a good breeze, they proceeded at a rapid rate, and passing through the Gut of Canso, launched into the broad waters of the Gulf of St. Lawrence, and made sail

for the Magdalen Islands. There several days were profitably spent, and proceeding thence they came in sight of the famous "Gannet Rock," where countless numbers of Solan Geese were nesting. A gale coming up, they reefed their sails and headed for the coast of Labrador, which was sighted next morning, and the "Ripley" was at length safely anchored in American Harbor. After a summer very pleasantly spent in Labrador, they embarked again in the "Ripley" and stopped long enough at Newfoundland to explore a portion of its woods and rivers. Landing at Picton, Nova Scotia, they left the "Ripley" and proceeded to Eastport, Maine, with their collection of specimens. While in Picton they called on Professor McCulloch, by whom they were received in a most cordial manner, and were shown his superb collection of Northern birds; and Audubon was presented with rare skins, eggs and nests. At St. Johns, New Brunswick, Audubon had the pleasure of meeting his old friend, Edward Harris of New York. Letters from his son in England were handed him by Mr. Harris, which compelled Audubon to abandon his contemplated trip through the woods of Quebec; and he immediately proceeded to Boston, where his wife was, and with her and his youngest son hurried on to New York, where Audubon added a number of subscribers to his list. It was necessary for Audubon to spend the winter in the south, and he therefore determined to set out immediately. He arrived in Charleston in October, 1833. Circumstances rendered impossible his projected trip along the Gulf of Mexico and the Floridas, and for that reason, after spending the winter in Charleston with Dr. Bachman, he returned to New York in March. Taking leave of his friends in New York he embarked on the packet-ship, the "North America,"

with an accession of sixty-two subscribers and a large amount of specimens.

On Audubon's return from the upper Mississippi, he found himself obliged to cross one of the wide prairies, which in that part of the United States vary the appearance of the country. His march was of long duration, and he saw the sun sinking beneath the horizon long before he could perceive any appearance of woodland, and nothing in the shape of a man had he met the whole day. Soon, however, he saw a fire-light and moved towards it, full of confidence that it proceeded from the camp of some wandering Indians. He was mistaken, however, and discovered by the glare that it was from the hearth of a small log cabin, and that a tall figure passed and repassed between him and the fire. Reaching the spot he requested a night's lodging, and was answered that he could stay if he wished. He walked in and took a stool by the fire. A young Indian was in the room, who at Audubon's approach pointed to one of his eyes, which was covered with blood. While in the act of discharging an arrow at a raccoon the shaft had split upon the cord and sprung back with such violence as to destroy his right eye. It being rather late, as Audubon observed by a fine gold watch which he took from his pocket, which attracted the covetous eyes of the hag who owned the cabin, he inquired for his bed. The woman wished to see the watch, and taking it from the chain, Audubon handed it to her. She was in ecstacy over it. The Indian rose from his seat and passed Audubon several times and pinched him silently. His eyes met those of the naturalist and his look instantly put Audubon on his guard. It then flashed across Audubon's mind that he was in peril. He asked the woman for his watch, wound it up, and under pretense of wishing to see how the weather was, picked up his gun and walked out of the cabin. As

soon as he was outside he slipped a couple of bullets in his gun, renewed the primings and scraped the edges of the flint. A short time elapsed after Audubon went to bed, when two stalwart youths made their appearance. They asked for whiskey and at the same time asked who the stranger was. The woman told them and at the same time made mention of Audubon's watch. Soon the woman took up a huge butcher knife and with the greatest coolness proceeded to sharpen it. Her task finished she walked to her reeling sons and said, "There, that'll soon settle him!" Audubon turned silently, whispered to his dog and lay ready to start up and shoot his assailants. The infernal hag was advancing slowly, probably contemplating the best manner in which to dispose of her victim. Audubon was several times on the point of rising and shooting her, but as he was about to do so the door opened suddenly and two stout travellers entered, each with a long rifle on his shoulder. Audubon bounded to his feet and told them of his peril. The drunken sons were secured and the woman shared the same fate. In the morning they unbound the feet of the captives, marched them into the road, set fire to their cabin and gave all the skins and implements to the young Indian. This was the one and only occasion when Audubon was in danger of his life from his fellowmen.

FRED W. PARKHURST,
Bath, Steuben Co., N. Y.

(TO BE CONTINUED.)

Crane Island.

In one of the fairest of the Minnesota lakes, not very many miles from the Twin Cities, there is situated a small island, perhaps forty acres in extent, where large numbers of Great Blue Heron and Double-crested Cormorant congregate to breed.

The island is known as Crane Island for the Herons are known only by that name in the country round about and the Cormorants are commonly called Black Loons.

Shortly after the ice breaks up in the spring, a Heron or a Cormorant may here and there be seen in his flight to the North, but it is not until the middle of May that the nests here are finished and the eggs deposited.

The nests of the Herons are built entirely of sticks and I should judge are about two feet and a half in diameter by three-fourths of a foot in thickness, while those of the Cormorants are not much more than half as large in diameter but are much thicker in proportion and made of smaller sticks.

Both are quite flat at the top. I have heard that a complement of Heron's eggs is commonly three or four.

When this island first became inhabited is beyond the memory of the oldest settler, but the depth of the loam might indicate that for a long period here has been a nesting place. At any rate the birds still come and still go and each spring brings them back seemingly undiminished in numbers despite the fact that cottages are now yearly rising on the shores.

I remember very clearly my first visit here a few years ago and the delightful surprise it gave me.

We had been fishing and lazily floating along most of the day when late in the afternoon we turned a point and came in sight of several small islands and the forest shores rising in low bluffs beyond.

It was a calm clear summer afternoon with not a ripple stirring the waters and the shadows that were cast into the lake were almost as lifelike as the shores themselves.

From all directions came the Herons lazily winging their way to one of the islands and occasionally a swifter Cormorant skimmed along the surface of the water.

From the distance the clatter of the combined efforts of the denizens of Crane Island came clearly to our ears for it was so calm that the creaking of an oar might be heard half a mile away.

In our wonderment and delight at the beauty of the scene we could hardly resist the temptation to row nearer and it was not long before we reached the island. We frightened a Woodchuck into his hole in our ascent up the stony bank, some larger animal moved away in the weeds at the top and in a minute or two we had picked our way through the brush and smaller trees that skirt the edge and were standing underneath the nests.

The island was covered with mammoth elms whose spreading tops almost intertwined with one another forming a sort of canopy overhead.

Here would be a tree that would contain a nest or two and there one that would contain a dozen mostly situated on the branches some distance out from the trunk.

Hérons and Cormorants dwelt side by side often nesting in the different crotches of the same limb.

Never did two more different birds dwell together in more perfect harmony.

The squabbles of a bird seem to be with his own kind only and a race war is out of the question. I fear it would go hard with the Cormorants if they did fight.

Now the form of a Heron is seen above the trees, a pair of long legs is dropped and the bird alights with an awkward balancing motion as if he expected the limb to break off with him.

There is a continual clatter as if all were trying to talk at once. I call it clatter out of want of another name, for it is a mingling of the squawks of the Heron and the clattering noise of the Cormorant.

Occasionally the sounds die almost out but a Heron gives vent to a harsh cry and all immediately begin again.

A commotion overhead attracts our attention and two Herons stand face to face with wings spread backward and open bills as if they were hissing at each other, for they do hiss when enraged, but they soon quiet down.

Beneath the trees the ground was alternately covered with tracts devoid of vegetation and patches of rank weeds which grew to the height of three or four feet, in places head high. As we parted these weeds in front of us and went from tract to tract we examined with eager interest all that lay before us, now turning over a nest that had fallen now poking about the bones of a fallen bird.

Everywhere there were the remains of fish, frogs and even mice and scattered about in abundance were the blue egg shells of the Herons and the chalky shells of the Cormorants.

One thing particularly noticeable was the number of holes of animals who no doubt grubbed an excellent living from fish that had been dropped.

I say "particularly noticeable" for the reason that one was very apt to run his foot in one while gazing skyward.

On returning I persisted in carrying a Heron's nest down to the boat and filling up one end of it, to the disgust of the rest of the party, having fine ideas of varnishing each stick and reposing it gracefully in one corner of my room, but the novelty of the thing having worn off, the remarks of my companions at last persuaded me to throw it overboard.

We set out towards home in one of those golden twilights, when the waters are illuminated sometime after the sun has gone down.

But even this soon must fade and as it faded the noise of the birds became less and less boisterous till finally it died away altogether and when we reached the point the sounds of our voices and the splashing of the oars alone broke the stillness of a starlight night.

I have since come to spend my summers on a lake not very far from this one and have seen much of both of the birds in question.

No marsh within five miles of the island is complete without its Heron or quota of Herons and I have often seen a dozen around one small lake standing statue like in the bogs.

Sometimes they are found in these places at night and the harsh cries of one flying across the waters after dark may often be heard.

As to captive Herons it is very often difficult to get them to eat, especially if they are old ones, yet I know of one that after being let loose returned regularly at meal times for his allowance.

I once obtained one that had been wounded and fastened him by a small rope so that he could wade about on the shore of the lake. He most obstinately refused all food and preferred to spend his time standing in one position all day long, and we finally had to shoot him.

They occasionally put in their appearance in front of the cottages in the early morning in search of fish left along the shore, and they seem to know very well when the people are stirring for they are not caught there after the earliest morning hours.

At a boathouse a few miles from the island, they had a large box, open at the top, standing in a few inches of water where frogs and minnows intended for bait were kept.

For several mornings the keepers found great losses to have occurred in the ranks of the frogs and fishes and finally one man put in his appearance at daybreak to catch the intruder. He found a most contented Heron inside the box calmly helping himself, who, when he saw that he was observed, made off at a rapid rate. The next morning vengeance was decided upon and the man laid concealed with a shot gun, but the bird had made his farewell

appearance for he was not seen, neither were they troubled with him again.

They are particularly treacherous like the rest of the Heron family and will strike for one's eyes every time. I have read two accounts of persons' losing an eye about this very lake.

A captive one makes no distinction between keeper or stranger, and one is as apt to strike suddenly out after being carressed and handled for days as when first captured and they strike with no little force for at one place they exhibit a pine wood oar with a Heron's bill protruding two inches through it and which was done by holding the oar in front of an enraged bird.

It is said that the county authorities have forbidden the shooting of the Herons for they are excellent scavengers and keep the shores clear of dead fish, frogs and the like, and help in a measure to keep down the mice and snakes. Not so much attention is paid to the Cormorants who spend their time in diving about the lakes catching fish. A tourist may occasionally bag one of these birds by way of novelty and I have heard of persons engaging in the brutish sport of killing them in numbers from beneath the nests, but the law is generally kept and they are permitted to fly across the passes unharmed.

When the young are able to fly the Herons may often be seen winging about by two's and three's, but soon after only solitary birds are seen.

They begin to disappear one by one as they leave for the more fertile marshes, and by the middle of August the island is left to the Cormorants and the spirits and hobgoblins that, it is hinted, inhabit the place.

The Cormorants bunch together and may be seen flying across the water or hanging about the island until the cold weather forces them to leave for a warmer climate.

H. M. GUILFORD,
Minneapolis, Minn.

Notes on the Phœbe.

There is a strong tendency among naturalists in general to study the habits and characteristics of the more rare birds and animals. There is probably not one amateur ornithologist in one hundred, in New England, but what could give a better off-hand description of the habits of the Golden Eagle, which he probably never saw, than of the Robin, which for four or five months in every year, he sees almost daily; or of the Phœbe, which, perhaps, annually builds its nest in his woodshed. And yet this little bird is well worthy of a careful study.

Probably there is no bird which is burdened with a greater variety of names. Scientifically, it is known as *Muscicapa fusca*, *Sayornis fusca* and *Sayornis phæbe*. Commonly, it is known as Phœbe, House Pewee, Flycatcher, Pewit, Bridge Bird, Moss Bird, Pewee and Pewit Flycatcher; and I presume I have not enumerated one half of its names. It is migratory, arriving in this locality early in April and departing about the middle of October. It is very much attached to one locality and if undisturbed in its nesting it will return each season to the same place. It loses little time, after its return, in seeking a nesting place, but almost immediately begins to build. Last spring I found a half-completed nest, on the nineteenth day of April. I did not visit this nest again until the middle of June, when I found two freshly laid eggs in the nest, and unmistakable signs that one brood had been raised and had left the nest.

April twenty-fourth I found a nest nearly completed. I visited this nest a week later and found three eggs. These were removed and in ten days I again visited it and found four more eggs. These were not disturbed. I did not see this nest again until about the middle of June, and then it was

abandoned and I saw no signs of any of those birds in the vicinity. About the middle of July, however, I again visited it and found four or five young birds just beginning to fly.

Another nest was found about the first of May, containing five eggs nearly hatched. These were removed and two weeks later there were four more eggs. These were not disturbed. I visited the nest three or four times before the young were able to fly. Then the nest was apparently abandoned for about a week, when the birds again took possession of it and laid four eggs.

I have found dozens of nests in which I know that but one brood was raised, but I have also found many in June and some as late as July, just in the process of construction, and I am very confident that this bird always rears two, and possibly three broods each season; and as I have shown it sometimes uses the same nest for the second brood. It does not, however, use the same nest two years in succession, but I have known it to tear an old nest to pieces and build in the same place; and I have known it to build the new nest but a few inches from the old and to use the greater part of the old nest in building the new.

The nest is made of dried grass, thickly cemented with mud, and covered, upon the outside, with a kind of brown moss which it transplants so neatly that it frequently takes root and grows. The interior is lined, first with a thick layer of soft hay and then one of feathers. Its walls are very thick and strong, and considering the size of the bird, the nest is rather large. In size and shape, and sometimes in location, it resembles the nest of the Robin, but its covering of moss prevents its ever being mistaken for such. It has been described as resembling the nest of the Barn Swallow. It differs from this however in its covering of moss and it has a greater proportion of hay

mixed with the mud of its walls, though not as much as that of the Robin. Then, too, the nest of the Phœbe is invariably built upon a shelf or projection, while that of the Barn Swallow is almost always glued to the perpendicular side of a rafter and supported only by the cohesion of its particles and its adhesion to the rafter.

The Phœbe always builds where neither wind nor rain nor the direct rays of the sun can reach its nest. I have sometimes found its nest under a bridge, but generally it prefers an open woodshed or a dilapidated building. In this immediate vicinity, where a great quantity of maple sugar is made, sugar houses are a favorite resort. It frequently nests in barns, but I have never found two nests occupying the same building at the same time. In choosing its location within a building it seems to prefer the surface of a narrow board, nailed to the under side of the rafters or overlays. But it sometimes selects exceedingly curious places. I once found a nest built upon the nest of a Chimney Swift. This nest I described in the June number of the OÖLOGIST, in an article entitled, "Notes upon the Barn Swallow." Once I found one built against a beam and resting only upon a large rail. I have found several built in false mortices, and one in an old chimney in a hole from which a brick had been taken. Another was on the top of a post about six feet from the ground, and still another on a small horizontal pole suspended by a rope in such a manner as to be almost continually swinging.

The eggs are of a milky whiteness, with a round spot on the large end, of a little different shade, which disappears with the blowing. Sometimes, but not often, there are very minute black spots upon it. The number of eggs in a nest varies from four to eight, but five is by far the most common number. After having completed the

masonry of the nest, the old bird allows three or four days to elapse, and then lines it. Laying is then begun and one egg is laid every day until the set is complete. Generally a few days then elapse before incubation begins. So far as I have been able to determine, the period of incubation is fourteen days, but from the difficulty of ascertaining just when it begins, I do not make this as a positive assertion. The old birds are very affectionate towards each other and mate for life and when not searching for food the male is sitting upon the edge of the nest. He never attempts to feed the young birds, though he may bring food to the female. The food of this bird consists entirely of insects which it invariably catches while upon the wing.

Early in the spring this bird has a very pleasant note, from the sound of which several of its names are derived. As nearly as I can write it, or as nearly as letters can reproduce it, the note is *pee-wee*, sounded very plaintively, but in a tone that can be heard a long way off. When its nest is disturbed it hops around uneasily and somewhat plaintively says *pect-pect*. I believe these are its only notes.

C. O. ORMSBEE,
Montpelier, Vt.

Conglomeration.

HAZIL.

There is a boy in our town, his name is *Bob White*. He is always *Robin* birds nests for he is an egg collector. One time while out collecting with his chum *Will* he spied a nest. "*Cedar Wax-wing!*" he exclaimed. "*I Sora* fly. There must be eggs in that nest. It is a difficult tree to climb and *Ruff* on one's shins; the nest is out on the end of that limb. *Willie* hold me do you think? I guess you had better hand

me that old *Black Rail*. It will help me to climb.

"*Yon Loon*," said *Will*, "you can *Knot* climb that tree." "I can," says *Bob*, "*Ani* ain't no *Booby* like you." *Poor Will*, his feelings were hurt, his eyelids began to *Flicker* and *Snowflake* pearly moisture trickled down his cheeks.

Bob at last managed to climb the tree *Puffin* from exhaustion. He exclaimed, "This heat would *Turnstone* to water!" Very carefully he creeps along the limb for the *Least Tern* and he will fall. After much trouble and exertion he reaches the nest—empty. Let us draw a curtain over this unhappy scene.

CLINTON M. CARY,
New York City.

Hutton's Vireo.

This is one of the most interesting birds which I had the pleasure of meeting during my first season in Oregon. My first set was collected May 31, 1892, from a nest found by my father. The nest was a light structure, hanging from a fir limb, five feet from the ground and ten feet from the tree, composed of grass and moss, lined with fine rootlets, and measuring two inches in diameter, by one and one-half deep, inside, and three and one-half by two and one-half outside. It contained five little beauties, pure white, speckled with two shades of reddish brown, mostly at the larger end. They measure 75x54, 76x53, 77x54, 75x54, 76x54.

On June 6th, father found another nest belonging to the same birds and partly built of materials from the old nest. It contained one egg.

June 10th, we went up and examined, finding that it still contained but one egg. Apparently the bird on seeing father remembered its former experience and thought best to leave; though this would appear to credit the bird

with the power of learning by experience which does not exactly agree with the definition of instinct. The Hutton's Vireo remains with us throughout the winter and is usually seen in company with the Oregon Chickadee.

FRED H. ANDRUS,
Elkton, Ore.

Protect Our Birds.

Dear Editor:

As I read the pages of the June OÖLOGIST I was very much impressed by the article under the head "Protect Our Birds." It seemed to me, as I read that article, that it ought to be endorsed by every true oölogist and lover of nature.

The writer in that article speaks of some collectors taking from "five to twenty-five sets of the same species; while they are identically the same in marking, size and shape."

Mr. Grady remarked also that if this wholesale destruction of our birds continues what will become of them? And Mr. Editor, what will become of them?

I think the one great trouble is, that so many of our so-called ornithologists are using (rifles) in a way that is shameful to the public. They shoot every little bird that comes in their sight.

Of course, it is necessary to shoot a bird once in a while, in order to tell what species it is; but when a collector takes from ten to twenty eggs of the same bird I do not think that he has to shoot the old birds every time in order to tell the kind.

If some of our collectors would stop, and reason with themselves, they would soon learn that God never put our birds on this beautiful earth to be slaughtered in the way that they have been; or, to have their nests robbed in such a shameful manner.

I am very glad that Mr. Grady wrote this article, for if some of our so-called collectors can comprehend anything,

they will soon see that Mr. Grady's article is worthy of example.

And in closing, let me add, "PROTECT OUR BIRDS."

P. S.—I have been taking your very useful paper for seven months and I am very much pleased with it.

CHAS. C. SWISHER,
Wyoming Co., Penn.

An Albino Nighthawk.

Some parties while hunting near Lynchburg, Va., Aug. 29, 1887, killed an albino Nighthawk. This bird was pure white excepting the breast which was very faintly marked with light yellow.

Two other albino Nighthawks have been seen near the same locality, but this is the only one which has been killed, as far as I know. Are there any other records on hand of albino Nighthawks?

J. W. D., Jr.

Some Twice Occupied Nests.

On April 15, '94, I found a set of English Sparrow's eggs in an old Woodpecker's hole. This hole was lined with horse hair and straw.

On May 10, 1894, I took a set of Bluebird's eggs from a hole in a maple tree. On May 20, '94, I took another set of four. This cavity had been used before by a pair of Crested Flycatchers.

On May 30, '94, I found a nest of four young Red-wing Blackbirds in a nest that had been built and used by a Black-throated Bunting.

On June 16, '94, I found a set of Bluebird eggs in a hole previously occupied by a Red-shafted Flicker.

On June 19 I found a set of Wren's eggs in a hole previously occupied by a Woodpecker.

On July 10 I found a set of Mourning Dove's eggs in a nest built and used by a Robin.

W. E. WILLIAMS,
Lawrence, Kansas.

THE OÖLOGIST,

A Monthly Magazine Devoted to
OÖLOGY AND ORNITHOLOGY.

FRANK H. LATTIN, Editor and Publisher.
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Correspondence and Items of Interest to the student of Birds, their Nests and Eggs, solicited from all.

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You Are a Judge.

Your decision must be mailed us not later than the *first* day of September. Write on back of a postal card the five articles which you have decided to be the *most valuable, instructive and interesting* in this number of Oölogist and mail to us. Number the articles in the order which you think the prizes should be awarded.

We give our Judges five prizes having an aggregate value of over \$5. one to each of the five whose decisions are nearest the final award of Mss. prizes.

JULY CONTEST

64 Judges.

1. Passenger Pigeon, 276.
2. Dove Life in Arizona, 217.
3. Bell's Vireo, 163.
4. Notes from Audubon's Biography, 156.
5. Language of Crows and Other Notes, 68.

Judges' prizes were awarded as follows:

1. Ed. Doolittle, Painesville, Ohio. Exact.

2. Walton Mitchell, St. Paul, Minn., 1, 2, 4, 3, 5.

3. N. G. Van De Water, Gretua, N. Y., 1, 2, 4, 3, 5.

4. B. A. Garrett, Ballston Spa, N. Y., 1, 2, 4, 3, 5.

5. Arthur P. Simmons, Troy, N. Y., 1, 2, 4, 3, 5.

The following Judges named the winning articles in exactly the same order as the last, hence we awarded each a fifth prize:

H. Gould Welborn, Lexington, N. C.

Hervey Hoskins, Newberg, Oregon.

Twenty-one other Judges named the winning articles.

All prizes were mailed the winners on Aug. 11.

Figures of Importance.

Examine the number following your name on the wrapper of this Oölogist. This number denotes the time when your subscription expires or has expired.

56	signifies your subscription expired June, 1890
62	" " " " " Dec. "
68	" " " " " June, 1891
74	" " " " " Dec. "
80	" " " " " June, 1892
86	" " " " " Dec. "
92	" " " " " June, 1893
98	" " " " " Dec. "
104	" " " " " June 1894
110	" " " " " will expire Dec. "

We are desirous of straightening our subscription books at once and trust our subscribers will send in their subscriptions for '94 including all arrearages, at their earliest conveniences, the amounts necessary to accomplish this are as follows:

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"104"—25c.

Should you desire to discontinue your subscription to the Oölogist your indebtedness to us is 10 cents less than the above amount. The figures are according to our books Aug. 13, 1894, and many renewals received since that date have been credited on our books, but not on the wrapper.

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Mr. K. B. MATHES,

who has been with "LATTIN" for a number of years and whom many readers of the OÖLOGIST met at the WORLD'S FAIR in '93, will have charge of all, or nearly all of "LATTIN's" exhibits this Fall.

It may be needless to add that the '94 will equal if not surpass all previous exhibits—both "LATTIN" and MR. MATHES are pioneers in the business.

"Lattin's" Exhibits for '94.

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Columbus, Ohio.

SEPTEMBER 10-21,

Michigan State Fair, Detroit, Mich.

SEPTEMBER 24-29,

Illinois State Fair, Springfield, Ills.

OCTOBER 1-6,

The Great St. Louis Fair, St. Louis, Mo.

And undoubtedly (positive announcement will be made in October OÖLOGIST)

OCTOBER 9-19,

Virginia Exposition, Richmond, Va.

OCTOBER 23-NOVEMBER 8,

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VOL. XI. NO. 10.

ALBION, N. Y., OCT., 1894.

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I SOLICIT correspondence from all parts of the U. S. concerning the *Violacea*. I am making them a special study and gladly receive notes on the plants. ARCHIE A. BELL, Geneva, O.

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FOR BEST cash offer. Small six light dynamo, cost ten dollars, fine condition. Star safety razor, been used but once, cost three and half. C. H. AGAR, 45 Putnam Ave., Brooklyn, N. Y.

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Please discontinue that exchange notice. I have more than I can do in a month in answering and filling exchanges and orders already received and I think my stock will be exhausted anyway. I had a stock of nearly 3,000 eggs. How is that? Ed. Van Winkle, Vans Harbor, Mich.

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COLLECTORS! I have Buffalo horns, U. S. stamps, tobacco tags, fine sets and singles with full data and beautiful specimens of round cacti for sale or exchange. H. L. HEATON, Oberlin, Kansas.

EGGS, Indian relics and fossils wanted. Will give printing press, Weeden engine, Vol. VII Oölogist, 1200 post marks, collection 500 stamps, botanical specimens, books or cash. Send lists. Will give hand stamp with name for 3 arrow points. GEO. A. RODMAN, Kingston, R. I.

WRENS WANTED.—First-class skins with full data. I can offer fine S. Cal. sets with nests and complete data; also some nice skins, such as 379a, 397, 408, 415b, 656, 665, 710, 742, 763, etc. No matter what species you have, write stating sex and plumage. Persons having skins of the rarer Wrens, will receive special offers. All letters answered. JOSEPH GRINNELL, Pasadena, Cal.

I WILL give fine sets with data or first-class skins in exchange for 12 bore B. L. shot gun in good order. G. F. DIPPIE, 324 George St., Toronto, Ont.

FIRST CLASS singles and back numbers of Oölogist from Nov., 1890 to date excepting numbers 4 and 12, Vol. 8 to exchange for common skins. WM. I. ROLFE, San Bernardino, Calif.

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ANNOUNCEMENT Extraordinary! Readers of the Oölogist will be pleased to see for the first time a good half-tone portrait of Editor Frank H. Lattin, which appears, together with a reminiscent, biographical sketch by H. R. Taylor, in the September number of the *Nidiologist*. The price for a "sample copy" has been invariably 10c, but out of compliment to the readers of the Oölogist, who all want "Lat-tin's" picture, we will send a copy of this number for 5 cents, cash or stamps. Other features and illustrations "above par." Write at once. THE NIDIOLOGIST, Alameda, California.

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FOR EXCHANGE.—Leach's Petrel in sets, also 1st class skins A. O. U. 76c, 759b, 608, 611a, 595, 585, 581, 559, 531, 528, 456, 255, 274, 420. H. T. VAN OSTRAND, Millbury, Mass.

FOR SALE CHEAP.—I am selling out my collection of sets cheap. Some fine sets of Eagle, Hawks, Owls and water birds very cheap. Special Rates to those wanting large number of sets. R. H. ROBERTSON, East Los Angeles, Cal.

WATCH for my *Christmas* offer of eggs next month. If you want eggs now send for my special October Bulletin. W. F. WEBB, Albion, N. Y.

CALIF. eggs to exchange for eggs not in my collection. Many common eggs wanted, but Water birds desired. I will also sell them at ½ cat. rates. LEE CHAMBERS, 1215 Buena Vista St., Los Angeles, Calif.

"K. I. C." Standard Datas, bound in books of 100, with detachable stubs, 30c per book. Will exchange for desirable eggs. Send lists and receive data samples. KERR, IRONS & CO., Council Bluffs, Iowa.

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TO EXCHANGE.—Football suit, Winchester 44 model 1873 rifle and '93 Slocum Tennis Racket. Eggs wanted. Write for particulars. W. B. JUDSON, 531 Eldorado St., Pasadena, Cal.

NOTICE.—I have a good many Natural History specimens and curios to exchange for others. Send stamp for list. W. H. HILLER, 147 W. 23d St., Los Angeles, Calif.

WOOD ENGRAVING TOOLS for exchange. Amateur's complete outfit. For particulars address, B. H. DOUGLASS Burlington, Kans.

My adv. in your Oölogist brought me at least 175 letters and a profit of \$25 last season. R. W. WILLIAMS, JR., Tallahassee, Fla.

EXCHANGE NOTICE.—I have some first class sets of common eggs to exchange for a Steven's 22 cal. rifle in good condition, or for eggs of other localities. W. LOU HART, 116 Lincoln Ave., Canton, Ohio.

TO EXCHANGE.—One good Colt's lightning repeating rifle 22 cal., for best offers in Eggs not in my collection. Send lists of Eggs that you have. Correspondence solicited. Address JOHN W. DANIEL, JR., Lynchburg, Va.

NOTICE My ad. about the new magazine, *The Museum*. Send \$1.00 bill at once and take advantage of offer which will never appear again. W. F. WEBB, Albion, N. Y.

To My Old Friends and Patrons.

I wish to call your special attention to the enclosed leaflet. * It may and it may not prove of interest to you, IF NOT, I'm sure you have some Friend or Neighbor whom it might and who would feel fully as grateful as the undersigned, should you call his or her attention to its contents.

You are undoubtedly aware that the partnership which existed during the past year between Mr. Webb and myself, has been dissolved (I've been too busy to inform you personally earlier) and that I am once more "going it alone" at the "old stand."

I also retain all of my former able assistants, and still have the largest stock and most varied assortment of Shells, Specimens, Marine and other Curios, &c, in America. In fact, I have over \$10,000 tied up in Specimens and Fair and Resort Goods which I wish to "untie" as soon as possible.

Any assistance that you can render me in that undertaking, in the shape of an order (anywhere from 5 cents to \$100) will be most thankfully received.

Trusting I shall have the pleasure of hearing from you at your earliest convenience, I remain, as ever,

Faithfully,

FRANK H. LATTIN.

EXPLANATORY: The above is the substance of a circular-letter which I mailed a few of my friends in States where I made exhibits this Fall with the same I enclosed a circular composed of my announcements on pages 290 and 294 in September OöLOGIST. Thinking it may be of interest to you I print the same in full.

I might also add that I have settled down for strictly business purposes for the next few months, at least, and can assure my patrons that any commission however small they may see fit to favor me with will receive honest, careful, "faithful" and last but not least my PERSONAL attention.

Albion, N. Y., Oct. 10, 1894.

FRANK H. LATTIN.

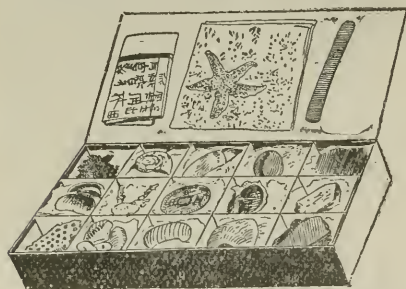
Dissolution Notice.

Notice is hereby given that the partnership lately existing between Frank H. Lattin and Walter F. Webb under the firm name of F. H. Lattin & Co., was dissolved on the 31st day of July, A. D., 1894, by mutual consent.

FRANK H. LATTIN.
WALTER F. WEBB.

Important: Your letters must never be addressed to F. H. Lattin and & Co., but to either FRANK H. LATTIN or WALTER F. Webb, which ever you may wish to receive the same. All matters pertaining to the OÖLOGIST must be addressed "LATTIN". By heeding this "pointer" you may save both yourself and the party you may wish your letter to reach both delay and possible unpleasantness.

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THE OÖLOGIST.

VOL. XI. NO. 10.

ALBION, N. Y., OCT., 1894.

WHOLE NO. 108

A Study of Nests.

In taking up the study of nests, let us consider them first as regards their construction, second as regards their position.

The materials of a nest, as viewed from the cabinet specimen only, will in a great many cases show from what location it was taken. For example, a nest of the Baltimore Oriole, in my possession, which was taken by the roadside very near the heart of the town, is composed exteriorly of white twine, yarn and a few red and blue threads, the lining a quantity of horse hair, a chicken feather or two, and a few strips of grape vine bark from a yard close by. It will be seen that all these materials could have been procured in the immediate vicinity of the nest, about the houses and streets. A nest taken on the outskirts of the woods, however, was composed almost entirely of fine fibres of milk weed bark, lined with one or two fine black rootlets, and a small piece of thread, all of which could have been procured near the nest. Those nests of the Robin, built near civilization, almost invariably contain some bit of cloth or paper, while those built "far from the haunts of man" are usually composed of grass, weed stalks and mud. The nests of the Yellow and Black-billed Cuckoos, built early in the season, near oaks and willows, almost invariably have more or less of the catkins of either or both those trees among their materials, those built later in the season lacking them. One nest of the Yellow-billed Cuckoo found after the leaves had fallen, contained a piece of newspaper on which a part of the famous Borden murder trial could be plainly deciphered, and as the date August 4th was referred to

and as a few days at least must have passed between that date and the printing and destroying of the paper and this piece being found by the bird, it is safe to say that the nest must have been begun during the second week of August, which is rather late nesting for this locality, though probably the pair had had their nest destroyed earlier in the season, for "the malicious urchin" is quite prevalent here. It has been my experience that the nests of the Black-billed Cuckoo are always better built than those of the Yellow-billed species, some nests of the former being almost as good as a rather flimsy Catbird's nest, while those of the latter are often merely a platform of twigs and a few dry leaves laid loosely together. The latter species also I have noticed will lay its eggs before the nest is quite done, furnishing it after the eggs have been deposited.

As a final illustration of the point in hand, I take the following from my note book: May 26th. In two separate patches of small hazel bushes about a quarter of a mile apart, I found two Chestnut-sided Warblers' nests and one peculiar thing was noticeable in each. The first nest was not far from a much travelled road, and the inside was *thickly* lined with horse hair, which must have been gathered from the road. The second nest, however was over a quarter of a mile from this road, but was not very far from a road through the woods which was not near so much used, and this nest had only about one-third the amount of hair in it that the first nest had, thus showing how the material of the nests was gathered near its situation." And so in the case of several other common birds as the Red-winged Blackbird, Wood Thrush, Chipping Sparrow, Least Flycatcher, Red-

eyed Vireo, Maryland Yellow-throat and others, the materials of the nest will often indicate as before stated the kind of place from which it came. But though in the foregoing birds the materials often vary according to locality, some birds will keep strictly to one or more materials which they seem to think necessary, always putting them in even though the other materials vary considerably. The Yellow Warbler has such preference, in this locality for the buff-colored wool found on the unfolding ponds of the Marsh spleenwort (*Asplenium thelypteroides*) and out of fifteen nests examined only four lacked this material, and in one case, at least the bird must have gone half a mile for it. Nests of the Yellow-throated Vireo, always, so far as my experience has shown, have more or less of the green lichens which grow on the bark of trees; or on old fences, on the outside of them, and sometimes the whole outside of the nest is covered, and at other times only a part of it. The bird's method of procuring these lichens is as follows: Having selected a suitable piece the builder will seize it in her bill and then make as if to fly off with it, but as it holds onto the bark rather hard, all she can do is to hang on to it with her bill and flutter and pull till at last it comes off, when it is carried to the nest and bound on with caterpillar silk. The Catbirds in this locality stick tenaciously to certain materials for their nests, namely between the outer part of the nest and the lining I find a layer of large bark strips, and in all but two out of twenty-eight cases, the lining is entirely of fine black rootlets. These two had a small quantity of horse hair mixed in with the rootlets which was probably procured in the pasture where the nests and also several horses were.

The nest of a bird will often show the builder's ingenuity in overcoming some difficulty, as in the case of an Oriole's

nest, where a string was woven into the nest at one side, and then carried up to a higher twig thus keeping it from closing up, as it would otherwise have done, so that the parent bird could not get in. The nests of the Red-winged Blackbirds, whether built in the reeds, or the bushes, in a marsh, in this locality, always have a thick layer of rushes or mud between the lining and the outer part of the structure. The purpose of this layer of mud or rushes, is not evident except in those nests built in the long grass, and in those thus placed, being only a couple of inches or so from the water, these outer materials and the layer of rushes or mud is soaked through, but the water never gets beyond this layer, which keeps the lining and the eggs perfectly dry. This fact leads me to ask this question: Why do the Robins, Wood Thrush and Purple Grackles always put a layer of mud between the lining and outer materials of their nests? It is evident that the Barn Swallow and the Phoebe use it to secure their nests to the beam or bridge respectively, but in the case of the birds before mentioned, I can see no need of it though it is always present. It might be barely possible that the three species may have, at some time, many years ago, nested on the ground in wet places and thus learned to use the mud layer, but for some reason changed their nesting places to trees and bushes, as the Red-winged Blackbird often is seen to do now, but if any of the readers of this should have another opinion on the subject, I would consider it a favor if they would let me know what they think.

While in New Hampshire this summer, I found a large colony of between three and four hundred Bank Swallows nesting in a high sandbank by the Connecticut river. One day, while there, a very heavy rain came up, and after it had cleared off I went down to the bank, and instead of finding that the burrows had been injured, I was sur-

prised to see that not one of them was wet in the least. The cause of this I found was that the overhanging top of the bank protected a certain area from storms, and not a single nest was built beyond this area, though they followed it along the boundary line, but did not pass the latter. It would seem that the birds had found all this out, either by experience in former years or by watching the bank carefully. A small part of the colony was photographed, where about seventy nests were dug in a space a little over a rod long.

It might be well to speak here of double nests, that is two separate nests being built by one pair of birds. A pair of Chipping Sparrows once built two such nests in one of our pear trees and about two feet apart. They carried material first to one and then to the other of the nests, till at last one was selected and finished the other being abandoned. In the Boston Museum of Natural History, there is a nest of the Red-eyed Vireo, so doubled, in this case however, the two nests are slung like saddle bags over a small twig, having a common top between them. The probable reason for building two nests, may be to see which is the better adapted to the builder's purpose, or perhaps in cases where both are complete the male may occupy one at night, but I can find no satisfactory proof of this. An extra amount of energy may also be accountable for this freak.

The Kingfishers almost invariably starts several holes and finally choose one, leaving the others in various stages of completion. The Kingfisher's method of building is very peculiar. Both birds take up positions on different perches near the bank in which the nest is to be dug. As far as I have observed, one bird, presumably the female, does most of the work, and at intervals of about a minute, will leave its perch, and flying to the selected spot in the bank, hover before it

a second, then dive at it with much force, striking it with its heavy bill, dislodging a small quantity of sand, when it again backs off and hovers for a second before it dives at it again, after which it returns to its perch once more. After several mornings work in this manner, for the birds do it leisurly, and work almost wholly in the early part of the day or sometimes a little before sunset, the hole is in far enough to admit of the bird's standing in the entrance to work, probably pecking with its bill though I have never been able to approach near enough to determine exactly. The chief worker is helped at intervals by the other bird, though I have often seen the later work on a separate hole, and sometimes giving each hole one or two pecks before returning to its perch. This method of working is of course the only practicable one for such large birds, or they might cling to the bank and peck as the Bank Swallows are said to do.

POSITION.

The position of a nest is usually selected with more or less reference to the nest's concealment. The *Mniotiltidae*, especially, as a family are very adept at hiding away their nests, those built on the ground being hardest to find, as they are tucked away out of sight in some clump of weeds or under a fallen bough. Indeed, about the only way to find these nests is to watch the birds while they are building, for as many authors have testified, a long time spent in searching is almost always unavailing, though one may know within a few feet where the hidden treasures are. Prof. Maynard says concerning the nest of the Pine-creeping Warbler (*Dendroica rigorsii*), "They keep close watch of their homes, and when any one chances to approach them, will chirp loudly: but although the collector can thus ascertain when he is in the vicinity of a nest, he will find that the birds have

been careful to place it in such a position that it cannot be seen from below, therefore it is exceedingly difficult to discover."

The nests of the large birds, of course, can not be so well concealed as those of the smaller species, but in this locality, the Crows are quite skillful in hiding their large domiciles. It would seem as if the birds studied the trees in the wood where they are going to build, till they find one which has a place near the top where they can place their nests, so that it is impossible to see it from below, unless one stands in some particular spot and even then one is often in doubt as to whether or not that dark place is really a nest or only shadow.

But aside from concealment, a nest may be so placed that it can not be got at by collectors or other enemies. The nests of the Baltimore Oriole illustrate this very well, as in the large majority of cases they are built far out on the ends of small limbs at a considerable elevation from the ground, so as to be inaccessible to man. The deep purse shape of the nests also would prevent birds of prey from seizing the inmates, and the branches on which the nests are built are usually too small for a large bird to stand on, on one foot, as it would be compelled to do. Dr. C. C. Abbott calls attention to the fact, also, that the deep nests are built in places more remote from the habitations of man, than the shallow ones, on account of Hawks and Owls being afraid to approach civilization, but this does not hold good in this locality.

The nest of the Kingbird usually is built near the end of a horizontal limb, and is often inaccessible. One nest found a few summers ago was built at the end of an alder limb which stretched out horizontally a few inches from and to the middle of a wide brook, where it could not have been reached unless one waded up to his waist. It is needless

to add that the eggs were hatched and the young safely reared.

It will be noticed that I have selected nests of common birds as examples in this paper, in order that, on account of the birds' more general distribution, the reader may verify, or disprove, as birds vary much in different localities, what has here been stated.

GLOVER M. ALLEN,
Newton, Mass.

An Oologist of Early Day.

Mr. John V. Crone's "Hash" in an old OÖLOGIST calls to mind a collection of birds eggs I had when ten or twelve years old. Some of your readers may be interested to know how we used to collect eggs at that time.

My father always strung his eggs on a piece of yarn and hung them above the fireplace, with a Crow's egg—which he says was *white* in those days—in the middle, and the smaller eggs on each side down to a Wren's or a Hummingbird's. The string had passed out of fashion before my day but such a thing as a drill or blowpipe was unheard of. I suppose some of the big boys did use them, as the time I am speaking of wasn't so *very* long ago, after all, but they were unheard of to us little fellows. We generally used a pin, but I have often made a hole in each end of an egg with a "pricker" from a hawthorn bush and some boys used to break the shell on a sharp twig or a splinter from a rail fence.

The boys usually kept the eggs in cigar boxes or even paper ones—though the mice were rather hard on these—and only the more progressive collectors used tin. A layer of sand, cotton or bran kept the eggs from rolling about. I knew one boy who had a fine tin box for his eggs. But he used bran and the bugs soon got to it and ate out the skin which lines the eggs so that they would fall to pieces if you looked

at them—almost. He thought he would get ahead of the bugs by “sterilizing” them, so he put the box into the oven for an hour or so. It “fixed” the bugs but it melted the solder and his nice box all fell to pieces. He used sand after that as the bugs were not attracted by it.

I was once told that it was nonsense to blow eggs—they were just as good without—’twas a useless waste of breath. I happened to find a Red-winged Blackbird’s egg soon after and thinking I would try it put it away in my box without blowing. The weather was pretty hot and I did not go there again for quite a while, but when I did * * * * There wasn’t any Blackbird’s egg or any other egg in that corner of the box. It must have exploded with tremendous force—comparatively—for it had blown a hole in the sand full three inches across and thrown a Chip-pie’s egg that was near it against the side of the box so hard that it was cracked.

Moral No. 1—Blow your eggs. Moral No. 2—Don’t believe everything you’re told.

We had never heard of the A. O. U. or Ridgway’s check list, so we had to do the next best thing—make one for ourselves. Each egg had a large number written on its side, and on the lid of the box was pasted the “key” to the collection. Data was never thought of at all and although we often took a complete set of eggs, three out of four were “traders” and our regular collection was all singles. Our highest authority was not the A. O. U. nor Coues’ Key but the one who had the most eggs. One hundred eggs was considered an immense collection.

I give a list of my collection at that time from an old “key”, which will show what names we used for the common birds. I have put in the A. O. U. numbers so that you may know to what the names refer. Hen. Runt egg.

Hen Hawk, 339.	Yellow-hammer 412.
Guinea Hen, Domestic.	Turtle.
Pigeon, “	Meadowlark, 501.
Crow, 488.	Crow Black, 511.
Yellow-billed Cuckoo, 387.	Robin, 761.
Starling, 498.	Bobolink, 494.
Tree Starling, 498.	Yellow Bird, 652.
King Bird, 444.	Bank Swallow, 616.
English Robin, 595.	Barn “ 618.
Blue Bird, 766.	Chimney “ 423.
Cat “ 704.	Eave “ 612.
Lazy “ 495.	Barn Phoebe, 456.
Potato “ 581.	Bridge “ 456.
Grou’d “ 581.	Tree “ 467.
Cherry “ 619.	Swamp Wren, 725.
Brown Thrush, 705.	House “ 721.
Fire Hang, 507.	Wild Canary, 529.
English Sparrow.	Chippy, 560.

The “Starling” was a bird which built in bunches of dock, weeds, etc., while the “Tree Starling” was the same bird nesting in a tree. Some of the boys thought the latter a different kind of bird laying a larger egg. A few had Swamp Black’s eggs, the same thing again building in a swamp. I don’t know why the Grosbeak was called English Robin, probably on account of its red breast. Certainly it is not like a Robin in any other way. The Lazy Bird was and is still so called because it is too lazy to make its own nest, and the Potato Bird was any bird that built in a hill of potatoes. Generally it was a Song Sparrow, but I have one egg, given me by a truthfni (?) “big boy,” which is totally different. It looks more to me like an Orchard Oriole’s but it was a treasure when I first got it.

The Cherry Bird was and is rather uncommon in our locality. The one I had then came from the home of an aunt in Massachusetts where they were nearly as common as the cherries they fed on. I have since found three nests at Wethersfield.

There is a queer thing about the Eave Swallow—Cliff the A. O. U. has it. When my father was a boy every barn had its flask shaped nests under the eaves. On my grandfather’s they made such a mess that he had to knock the nests down. He broke them up in three or four years but they used to

breed in smaller numbers on the back of the cider mill where their droppings didn't show so much. When I collected they had all gone but three nests and those have been gone now these ten years. Now I don't know of a nest in town. Some think them much thicker in the East than formerly, but they have behaved just the other way in this locality.

We boys always thought that the Barn Phoebe and Bridge Phoebe were distinct varieties. The Barn Phoebe built a nest flat on a beam, merely a bunch of moss and a little mud, while the Bridge Phoebe's establishment was a compact structure fastened to the perpendicular face of a stone pier or wooden bridge girder after the manner of the Barn Swallow. It had, necessarily; more mud and less moss than the barn nest and often lasted several years. A few had an egg they called a Shed Phoebe but that may be set down to a striving for more kinds to boast of and not to any real difference in the egg.

When the boys swallowed Tree Starlings and Shed Phœbes so freely it seems queer that they wouldn't believe in the Tree Phoebe but some didn't. Only last spring a rising young collector wanted me to stand by him in saying that there was no such thing. Wasn't it just the same as a Barn Phoebe, he asked?

I had never heard of a Flycatcher, except in books, until after I had collected quite a long time.

It is easy to see that the bright yellow of the Goldfinch caused it to be called Canary, but we didn't find the nests much they came so late in the season. There was always a good deal of confusion between this bird and the Yellow Warbler. I always supposed that the Goldfinch laid a spotted egg and the Warbler a blue one until I found the nests myself.

I still have a majority of my old eggs,

and though some are cracked and some—like the "Potato Bird"—are "bogus", I have a fondness for them above any I have for later acquisitions.

After all school day "finds" like school day friends are the dearest.

HENRY R. BUCK,
Wethersfield, Conn.

Traill's Flycatcher.

The retiring disposition of this gentle spirited Flycatcher, and its lack of forcefulness with which to attract attention to its presence, as well as its resemblance to several of its congeners, have prevented it from forming as wide an acquaintance as its abundance warrants. In this locality it is the most common Flycatcher though it is the least studied, owing to the more familiar habits of the other species. It is known to boys who ramble along the hedges as the "Pe-wee Flycatcher," and it certainly resembles the Pewee in general coloration and in habits, except an excessive restlessness which not often allows it to retain a position favorable to careful examination by the observer. While the Pewee will return to the same perch repeatedly after darting into the air to capture its prey, even when aware of observation, Traill's Flycatcher changes its base of operations rapidly and almost invariably stations itself so that there is foliage between it and an observer. It has no lofty aspirations, rarely perching above the limits of the bushes and hedges it frequents, while the Pewee selects a dead branch of a tree, often quite high and always exposed, for its point of reconnoiter.

Untrimmed hedges of two to four seasons' growth appear to be their favorite places of resort in the dry prairie regions as well as bushes bordering water courses and standing in meadows and low situations. Places frequented by Bell's and the White-eyed Vireos are

likely to be inhabited by the Flycatcher. For the first few weeks after its arrival from the south it dallies among the foliage with its companions and devotes its time to quiet courtship and the delights of love, enjoying something similar to the honeymoon of more rational beings. If we ramble along a hedgerow at this season we shall hear it sporting with its mates, uttering a gentle *queet*, perhaps followed by a low squeaky monologue or dialogue. Presently it will dart into view pursued by a companion, a male pursuing a female, both saying the soft but emphatic *queet*, and then they will disappear in the foliage as quickly as they appeared. When over the hedge out of our sight, they will talk in a low, lisping chatter, readily suggestive of the first efforts of a child to blow his tin whistle, this being the nearest approach to singing. Perhaps one of the birds will fly over and perch momentarily on a bare limb in a Pewee-like manner, moving away when he sees an intruder. In the breeding season all this occurs near the nest; in fact it means that you are within a small radius from its home, from which neither male nor female seldom venture very far.

Nests of Traill's Flycatcher are seldom found in this locality before the second week of June. I have repeatedly looked for them earlier without success. Hedges furnish the most favored sites and the distance from the ground varies between three and ten feet, the higher sites being in higher hedges. Hazel, plum and alder bushes are to their taste, and among such bushes the nest is generally placed in an upright crotch. On July 30th I found a nest four feet from the ground in a wild plum bush. It was placed on a horizontal branch near the extremity where twigs diverged from either side, forming a firm base of support. In hedges the nest is almost invariably set on a horizontal branch and bound to

one or more nearly upright twigs. I have never found a nest fastened around the branch on which it was placed. In this season I have found and examined twenty-three nests of this species, all of which except two, one in a hedge and one in a plum bush, were on horizontal branches. Frequently, however, nests are found on obliquely ascending branches at points where forking twigs afford places for attachment, such situations being very similar to the usual nesting sites of the Goldfinch. The highest nests in hedges are often set in regular crotches. Most of the nests are found between five and eight feet from the ground.

There is little variation in the construction of nests. The materials are grayish vegetable bark fibers, dried stems of weeds, feathers and pieces of gossamer which are carried in large mouthfuls by the builders and therefore the fabrication is not long in building. Without, the structure has no especial appearance of neatness, and resembles the work of the Goldfinch and the Yellow Warbler, though lacking the compactness of the nests of those species and averaging rather larger. The cavity is finished more smoothly than the exterior, usually with fine dried grass and a few downy feathers. Nests I have examined range between three and two and a half inches in diameter externally and from two and a half to two and one fourth inches high sitting in position. The cavity varies between two and two and one-fourth inches in width, and averages one and a half in depth. Among twenty-three nests four held four eggs each, nine held three incubated eggs each, four contained three fresh eggs each and six contained three young each.

I am convinced that only one brood is reared in the season in this locality as I have searched carefully for second nests without success, no nest contain-

ing fresh eggs being found after June 28. If the first nest and eggs should be taken or destroyed a second attempt at nidification will be made in the vicinity of the first site. The female is not a close sitter and from my observations is rarely surprised on the nest. On only two of the above nests were the birds found sitting, and these two were approached at dusk after most birds had retired for the night; in fact it was so dark that the nests would have been passed had not the birds revealed them by their startled flight. When the nest is disturbed, the parent birds frequently flit about in the foliage in the vicinity, protesting with their *qucet* and often betraying much solicitude. Usually however, they appear to take very little interest in the fate of their home and family.

P. M. SILLOWAY,
Virden, Ill.

Notes From Audubon's Biography.

Part V.

Ten years have now elapsed since the first number of the Illustrations of the Birds of America made its appearance. Audubon estimated at that time that it would take sixteen years to complete the work, and this was so announced in the prospectus which was issued and distributed over the country. His friends did not think there was a possibility of his reaching the goal which his ambition had placed before him, and he was strongly urged by many of his friends to abandon the enterprise, dispose of his drawings, and return to his native country. Having made arrangements for meeting the first difficulties, Audubon turned his entire attention to the improvement of his drawings, and was at length pleased to note that they were steadily increasing in merit. He was pleased to note also that every engraving completed by Mr. Havell was better than its predecessor. His friends also complimented him on

his more favorable prospects. Number after number appeared in regular succession, and after four years of anxiety and hard work, he was presented by Mr. Havell with the First Volume of the Birds of America. Convinced that there had been no falling off in the engraving of his plates, but rather a change for the better, he looked eagerly forward to the time when the second volume should be completed.

About the eighth year after the commencement of his work a nobleman called on Audubon, with his family and requested to be shown some of Audubon's original drawings. This desire was the more readily acceded to by Audubon because his guest was an advanced student of Ornithology. In the course of the conversation Audubon was asked how long it would be before the work was finished. When he said it would be eight years more the nobleman shrugged his shoulders and with a sigh said, "I may not see it finished, but my children will, and you may please to add my name to your list of subscribers." This remark sunk deeply into Audubon's mind, and the thought often came to him that *he* might not see the work finished, although his *children might*.

The greater part of the first eight years after the engraving of his drawings was commenced was spent in London and Edinburgh. Audubon's desire to compare his specimens with those of the Zoological Society of London induced him to ask permission to do so, which the Counsel freely accorded.

The Ornithology of the United States may be said to have been commenced by Alexander Wilson, whose premature death prevented him from completing his labors. It is unnecessary to state how well he performed his task; but although he succeeded in observing and obtaining a large number of our birds, yet he left many which were afterwards discovered through the untiring zeal of Audubon.

While at Natchez on December 31, 1820, a little incident occurred which well nigh resulted in a catastrophe. A friend proposed a trip to New Orleans, which Audubon acceded to, and soon after they were ploughing along at full speed. Towards evening inquiries were made respecting certain portions of their baggage, among which was one of Audubon's portfolios containing a large number of drawings, many of which represented birds hitherto unfigured. The portfolio was nowhere to be found, and Audubon at last remembered that he had handed it to a servant to carry on board, but in the hurry and turmoil of embarkation it was overlooked and left behind. It was useless for Audubon to fret, so he began to devise a plan for its recovery. He wrote to Mr. Garnier, and his venerable friend Charles Carre. After an interval of two months and a half he had the gratification of receiving a letter from Mr. A. P. Bodley of Natchez, stating that the missing portfolio had been found and was deposited at the office of the "Mississippi Republican," whence an order from Audubon would liberate it. Through the kindness of Mr. Garnier it was received on April 5th, all the drawings present and uninjured with the exception of one, which Audubon laughingly regarded as for commission.

Nearly three years have now passed since the Third Volume of the Birds of America made its appearance, and about twelve since the first fasciculus of his *Illustrations of the Birds of America* was submitted to public inspection. This magnificent work, comprising four hundred and thirty-five plates and ten hundred and sixty-five figures, was finished on the 20th day of June, 1838, without the continuity of its execution having been broken for a single day, and the numbers having been delivered with exemplary regularity.

The adventures and vicissitudes which

fell to the lot of Audubon, instead of diminishing his enthusiasm, only served to inflame it the more, and imparted a toughness to his naturally strong constitution, and to his naturally buoyant mind an elasticity such as to assure him, that, although somewhat old, he could yet perform a journey of any length on foot were he sure that by so doing he could thereby add a little something to his knowledge of the American fauna.

When Audubon last left Edinburgh he went to London, full of a desire to visit America once more before his great life-work should be completed. It was the wish and dream of his life that he might cross the Continent of America, gaze on the sublime majesty of the Rockies, wander along the fertile valleys of the Oregon, and search the shores of the Pacific and a portion of North Carolina; but circumstances were such that it was impossible to follow out this plan. Arriving in London Audubon and his family were kindly welcomed by Audubon's brother-in-law, Alexander Gordon, Esq., and were soon after established in a house on Wimpole street.

Mr. Audubon was informed by his engraver one day soon after his arrival in London that a gentleman, a Fellow of the Royal Society, had subscribed for the *Birds of America*, and in a few days Audubon had the pleasure of seeing him personally. This man was a surgeon of the highest merit, and soon after Audubon made his acquaintance he took charge of Audubon's wife's health and attended her for years, but never a farthing would he receive in payment.

Having been long desirous of introducing into America European birds, Audubon secured about a hundred specimens, in perfect health, consisting of Starlings, Skylarks, Jays and Wood Pigeons, with the intention of setting them loose in the Western States. They

were placed in ample cages and sent aboard at London docks, but the venture was almost a total failure, as nearly every bird was dead before the vessel anchored in New York harbor.

(TO BE CONTINUED).

Nidification of the Fish Crow.

So little has been written on the nesting of this species, that it has occurred to the writer to make known to those who are interested, the notes taken on a single day's collecting trip, in which the *Corvus ossifragus* figured prominently. May 18th, '94, I found about 40 pair breeding on one of the numerous islands on the South Jersey coast, Cape May county. The timber consists of large White Holly and Red Cedar, the latter dead or alive, invariably covered with *usnea*.

The bird usually flushed before one has observed the nest in consequence of this in connection with the fact that almost every tree contained its one, two or three nests, and that they all looked alike from below; we were compelled to climb upward of 70 or 80 trees. Fortunately they were easily ascended with climbers and were all within thirty-nine feet of the ground. A number of birds of this species, returning from their crabbing trips or thieving expeditions for the eggs of the Clapper Rail; constantly hovered above, out of gunshot, protesting in their guttural clatter. Two sets of 4, four sets of 5, and one set of 6 eggs were found, all containing small embryos.

While the eggs do not differ from certain examples of the *Corvus americanus* in my collection, the nests are totally different in both composition and workmanship. Placed indifferently in a fork or out on a branch of a tree, it is composed of sticks, twigs, sometimes with the addition of cedar bark and *usnea* or tree moss; lined with strips of cedar bark.

No earth being used the nest presents a neat appearance. The outside depth and diameter are equal. The measurements are as following in inches.

Inside: Depth, 4 to 5; diameter, 6 to 8. Outside: Depth, 12 to 15; diameter, 12 to 15.

Three sets before me exhibit the markings of the series.

Set I. Six eggs. From pale malachite to light glaucous-green, spotted and blotched with mouse and olive grey, overlaid with rather large spots and blotches of olive green, heaviest at larger ends, and grading No. 1 (the heaviest marked) to No. 6, which is lightest. A few scattered spots of clove brown found on every egg. 1.51x1.10, 1.55x1.10, 1.52x1.11, 1.49x1.12, 1.49x1.11, 1.53x1.08.

Set II. Five eggs. Fading glaucous-green, uniformly spotted and dotted with olive green, a few scattered speckles of clove brown appearing over the olive green. All eggs alike. 1.52x1.06, 1.51x1.07, 1.50x1.06, 1.54x1.08, 1.40x1.02.

Set III. Four eggs. Pale glaucous-green, with shell markings of mouse and olive grey, overlaid with spots and large blotches of olive green and clove brown, much the heaviest at the large ends. Markings clearly defined. The clove brown predominating on fourth egg. 1.47x1.01, 1.50x.96, 1.42x1.02, 1.45x1.01

A nest containing fully fledged young of the *C. americanus* was found by my companion, Mr. Lionel F. Bowers. It would appear that the latter nested fully a month previous to its smaller cousin.

It is worth observing that the natives make no distinction between the two species, considering them the same; altho' the difference in size is at once apparent to the novice.

F. L. BURNS.

Nesting Habits of the Golden-winged Warbler

This is the only species of the genus which is known to breed regularly in the Lower Peninsula. Perhaps we might call it the most abundant species, but one other the Nashville Warbler, is very common during the spring migration and nests in some sections.

The Golden-winged Warbler, *Helminthophila chrysoptera* (L.) arrives about May first on Michigan's southern boundary, but often in April. I have known it to appear on April 26th again not be seen till May 11th, but it is probable that it always arrives by the first week of May, but is overlooked at times. The males appear first. In fact the females are hardly to be seen at any time, for they are very retiring at all seasons.

Often as collectors are tramping about low clearings, or at the edges of basswood, ash and elm forests, or in boggy land covered with willows, alders and swamp scrub, a faint series of notes may be heard. These notes cannot be called a song but they evidently answer the purpose.

Ordinarily the effort sounds like *zwee-c-e-e-e* long drawn out, but this is often varied by *whee-e-e-e-e-e*.

This effort is sometimes changed to a crazy series of notes which cannot be described, but which are in no sense to be considered musical.

At the time the strain is issued it is next to impossible to tell from whence the sounds proceed, and it is often exceedingly difficult to locate the singer. I have repeatedly supposed the notes to come from high in the trees when it proved that the singer was on the ground. Again the notes seemed to rise from beneath my feet when the bird was located in a tree. Generally the Gold-wing sings from a low bush or limb of a tree, and it is rare that one is found well up from the ground. Still I have shot the birds from the tops of tall forest trees. In addition to the

songs, there are some call notes, common to both sexes, and one of these, a penetrating, metallic sound, is quite characteristic of this species.

The males are quite conspicuous and are not difficult to secure but a female is quite a rarity unless shot during migration, or from or near the nest.

One sultry day, June 5th, several years ago, while hunting about a clearing, I flushed a female Gold-wing, and feeling satisfied from her actions that she had a nest near she was shot to insure identity. Judge of my disappointment, after a few minutes search to discover five young birds in a well concealed nest among the tussocks of rank marsh grass. Regretting the misfortune to the young, I passed on with caution, as several birds were singing about me. In a short time another bird was flushed, this time a male, which led me to hope that the father of the unfortunate young would take care of them.

The second nest contained five eggs which proved to be too far advanced in incubation to save. This nest, like the first was placed on the ground, and was supported by small shoots and grass.

In construction the nest in no way resembles the structure of any bird that I have met with, but it comes nearer in materials to the nest of the Maryland Yellow-throat. The bulk of the nest is composed of course leaves and dried grasses, with a plentiful amount of coarse strips of grape vine bark. The lining was of fine roots and there was nothing of that artistic finish, and make-up of delicate materials which lend a charm to the appearance of many small bird's nests. The nest as a whole was bulky, and large for the size of the bird.

At various times I have found this Warbler nesting in several sections of the state. At the North a favorite location is at the edge of a pinery where it

borders on a lower piece of land. Mr Jerome Trombly of Monroe county informs me that a favorite selection is among a lot of shoots of the spice bush which support it at the sides.

The eggs are given at from four to six, but in this state five seems to be the regulation set, while only four are sometimes found. So far as my experience goes they are always crystal white dotted with reddish at the larger end; the fine dots often forming a ring. The averages given of dimensions are usually larger than those I have met with and I am quite certain that the eggs of this Warbler are smaller than the eggs of any other of the family with which I have had experience.

While I cannot assert that these birds breed in colonies, still it is possible that this is the case. In partial substantiation of this I would record the discovery of three nests within an area of less than an acre, and it will be seen by observing ornithologists that several males are found in the same neighborhood generally.

Like several other species of Warblers this bird is not constant to a neighborhood year after year. I know of localities where birds have been found two successive seasons but this is unusual I believe.

When we consider the localities chosen, it is not strange that the species varies its abode, as the new lands and clearings often undergo great changes within a twelve month. Specimens are sometimes taken in abundance in a neighborhood where suitable ground is to be found, and the following season not a bird or nest is to be seen anywhere in the locality.

The Gold-wing evidently prefers low sections of land, and appears most at home in quarters where deep woods border marshy tracts. I have yet to meet with the birds in very high and dry localities, although they are sometimes seen in elevated swampy spots.

I have never found the birds in oak openings, hickory lands or sandy soil.

After the nesting period has passed the males are silent and but little is to be learned about them. I know nothing as to the date of departure of this bird which is one of the most beautiful of our thirty-eight species of Michigan Warblers.

SCOLO PAX.

Observations on Birds.

Mr. S. R. Ingersoll in the ORNITHOLOGIST and OÖLOGIST of May, 1893, gives the information that twenty-six nests of fourteen species of birds were to be found within three hundred feet of his house. These nests all contained eggs or young, but he fails to state the situation of his home otherwise than that "it is in the midst of an apple orchard" and he does not say whether the nests were all to be found at one time or during the season. If this item refers to a particular date, or even month, it is remarkable, if the boundary of three hundred feet is exactly measured; but if the nests of several seasons, or even one full year are intended, the item loses its interest. Mr. Ingersoll also fails to give his residence, a point which should never be omitted.

In July '93, Mr. O. Widmann of Missouri, and whose home is at Old Orchard, I believe, presented a still more surprising list, giving the names of thirty-two species of birds which were found breeding within the same limits from his house. And these birds occupied (55) nests, not to mention the many nests of the European Tree Sparrow, and ignoring the Cowbird which was also present as an uninvited guest.

It would indeed be charming to visit Mr. Widmann in his enchanting retreat and listen to the bird chorus which must constantly regale him with varied carols for at least three months of the year. It is very pleasing to know that

this happy gathering of songsters is fostered and protected by their patron where they can pillage the garden and fruit trees without restraint, only repaying the owner by their agreeable presence and delightful melodies.

My home is in the city where one is denied the presence of most of our birds. Still, in spring and fall migrations, many species flit through or over my home yard. During a large share of the time for the past twenty-five years I have recorded the visitors to our yard, and this list, started as the result of a boyish whim, has grown to a reliable record of no mean size. The number of species of birds identified in or over our yard in size, five and a quarter by twelve rods, is one hundred and thirty-four,* while (19) species have been found nesting at various times. In one tree alone, a burr oak, *Quercus macrocarpa*, in this yard of (63) square rods, I have recorded sixty-four species of birds †during the last quarter of a century, in which time the village of Kalamazoo, Mich., has grown to a city of 20,000 inhabitants.

Three hundred feet from a common center gives a circumference of over (108) rods equal to more than eight times the area of the space where my notes were taken. When we consider that these notes are mainly from observations in the village or city, the good results of continued observation are apparent.

MORRIS GIBBS.

Albinos of the Grasshopper Sparrow.

On the 30th of May, 1893, while engaged in making a collection of eggs for the cabinet of Central University, a bright boy who was assisting me brought me a nest which he had scooped with his hands from a depression in

the ground in an open meadow where it was partially concealed by an overhanging tuft of grass. In materials and structure it was precisely like the nests ordinarily built by the Song Sparrow in similar depressions in the ground. The eggs, which were five in number, were of about the usual size and shape of those of the Song Sparrow, but were spotlessly and immaculate white. Knowing the propensity of the Song Sparrow to vary the coloring and markings of its eggs, I immediately concluded that the nest must be of this species, but the boy earnestly protested that he knew a Song Sparrow when he saw it, and this was not one but a somewhat smaller bird with yellow upon its breast and wings. As he had found the bird on the nest, was a close observer, and had every opportunity to make accurate observation, this of course settled the matter as far as the claims of the Song Sparrow went. We went as soon as practicable to the spot where the nest was found, but the bird was gone and the most patient and diligent search failed to find her again, and my note book received the very unsatisfactory entry: "Set of five, about .75x.65, pure white, somewhat incubated; nest on the ground, in open meadow, like Song Sparrow; species unknown."

On the 15th of June, 1894, while on a similar expedition my son startled a bird from her nest in a similar depression in the ground. Catching a glimpse of the white eggs and the yellow wings, and not being able to identify the bird, he shot her and brought her home with the nest and five pure white eggs. Upon examination the bird proved to be unquestionably the Grasshopper Sparrow or Yellow-winged Sparrow, (*Ammodramus saviannarum passerinus*), and as the nest and set of eggs, taken last year, are the exact counterpart in all respects of this last set which has been fully identified, there remains no doubt that both are of the same species (A. O. U. 547).

After consulting all the authorities at my command I find no recorded instance of sets of eggs of this bird that are spotlessly white. If any reader of the OÖLOGIST has had an experience similar to mine I should be glad to hear from them.

T. D. WITHERSPOON,
Richmond, Ky.

* The names of these birds are given in full in *Forest and Stream*, N. Y., date August 11, 1892, in article entitled, "Bird Life in a City Yard."

† The list of these (64) species is given in *Science*, N. Y. City, October 27, 1903, in an article "The Visitors to One Oak Tree."

THE OÖLOGIST.

A Monthly Magazine Devoted to

OÖLOGY AND ORNITHOLOGY.

FRANK H. LATTIN, Editor and Publisher.
ALBION, N. Y.

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You Are a Judge.

Your decision must be mailed us not later than the *first* day of November. Write on back of a postal card the five articles which *you* have decided to be the *most valuable, instructive and interesting* in this number of OöLOGIST and mail to us. Number the articles in the order which you think the prizes should be awarded.

We give our Judges five prizes having an aggregate value of over \$5, one to each of the five whose decisions are nearest the final award of Mss. prizes.

AUGUST CONTEST.

Fifty-one Judges

1. Nesting Habits of the Killdeer, 181.
2. Nesting of the Western Gull, 141.
3. Notes from Audubon's Biography, 126.
4. The First Day of June, '94, 109.
5. Nesting of the Whooping Crane, 72.

The following articles received credits as follows:

6. Thrasher's Song, 70.

7. Road Runner, 55.

The lucky Judges:

1. No. 45.—Fred S. Haggart, Chagrin Falls, Ohio; 4, 2, 3, 1, 5.
2. No. 4—C. H. Finne, Little Rock, Ark.; 2, 1, 3, 5, 4.
3. No. 3—Cyrus Crosby, Crosby, N. Y.; 1, 5, 4, 2, 3.
4. No. 16—D. Franklin Weeks, Portland, Oregon; 1, 4, 2, 3, 6.
5. No. 36—Otto Grady, Ludlow, Ky.; 2, 1, 3, 4, 6.

SEPTEMBER CONTEST.

Forty-eight Judges.

1. Nesting Habits of the Hooded Warbler, 220.
2. Crane Island, 178.
3. Notes from Audubon's Biography, 128.
4. Notes on the Phoebe, 112.
5. Oölogy vs. Philately, 64.

Eight Judges named the winning articles in their *exact* order. The prizes were awarded as follows:

1. No. 6—Walton Mitchell, St. Paul, Minn.
2. No. 13—B. A. Garrett, Ballston Spa, N. Y.
3. No. 18—Millard Van Wagner, Gretna, N. Y.
4. No. 30—C. O. Nifong, Virden, Ills.

A fifth prize was awarded each of the following:

- No. 31—Frank N. Wright, Virden, Ills.
- No. 34—H. C. Lillie, Visalia, Calif.
- No. 41—D. Franklin Weeks, Portland, Oregon.
- No. 48—Fred McAllister, Davison, Mich.

All prizes for both the August and September contests were mailed on October 10th.

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OÖLOGIST.

Monthly.

50c. per Year.

VOL. XI. NO. 11.

ALBION, N. Y., NOV., 1894.

WHOLE NO. 109

Wants, Exchanges, and For Sales.

Brief special announcements, "Wants," "Exchanges" "For Sales," inserted in this department for 50c per 35 words. Notices over 35 words, charged at the rate of one cent per each additional word. No notice inserted for less than 50c. Terms, cash with order.

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I AM building up a general scientific collection, embracing all departments of the Natural Sciences and if you have anything truly desirable to offer in exchange for anything I may have in stock or if you have any standard books or publications that you wish to dispose of I shall be pleased to correspond with you. When writing give full descriptions stating your lowest exchange price and give me an idea of about what you would like in return. FRANK H. LATTIN, Albion, N. Y.

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Between now and Christmas I shall offer Birds Eggs of all kinds lower than ever before. Look over the following, and the discounts offered and send in your order at once. All are strictly first-class. Data accompanies sets only. Discounts: Parties sending \$1 bill may select eggs to the amount of \$1.25. Send \$2 and select eggs to the value of \$2.50. Send \$3 and select eggs to value of 4.50. Send \$4 and select eggs to value of \$6.50. Send \$5 and select eggs to value of \$8.50. Send \$8 and select eggs to the value of \$16 or send \$10 and select eggs to the value of \$25. All are sent pre-paid. In addition to above discounts, parties sending \$5.00 order or over, will be entitled to a years subscription to the MUSEUM, free. See ad. elsewhere.

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Amer. Herring Gull.....	20	Tex. Screech Owl.....	40	Purple Martin.....	12
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Laughing Gull.....	20	Road-runner.....	20	Barn Swallow.....	05
Franklin's Gull.....	30	Yellow-bill Cuckoo.....	10	Tree Swallow.....	15
Cabot's Tern.....	40	Black-bill Cuckoo.....	15	Bank Swallow.....	03
Caspian Tern.....	40	Baird's Woodpecker.....	75	Cedar Waxwing.....	10
Common Tern.....	08	Gold-fronted Woodpecker.....	50	Loggerhead Shrike.....	08
Black Tern.....	10	Flicker.....	03	White-rumped Shrike.....	08
Sooty Tern.....	25	Nighthawk.....	40	Red-eyed Vireo.....	10
Noddy Tern.....	50	Western Nighthawk.....	40	Warbling Vireo.....	15
Fulmar.....	50	Texan Nighthawk.....	40	Yellow-throated Vireo.....	25
Manx Shearwater.....	1 00	Ruby-throated Hummer.....	50	White-eyed Vireo.....	15
Leach's Petrel.....	20	Nests of Hummer, asstd.....	25	Bell's Vireo.....	15
Gannet.....	35	Scis-tail Flycatcher.....	10	Prothonotary Warbler.....	25
Cormorant.....	30	Kingbird.....	05	Golden-winged Warbler.....	75
Farrallone Cormorant.....	40	Crested Flycatcher.....	10	Parula Warbler.....	20
White Pelican.....	35	Mex. crested Flycatcher.....	30	Myrtle Warbler.....	75
Brown Pelican.....	25	Phoebe.....	05	Magnolia Warbler.....	50
Blue wing Teal.....	20	Wood Pewee.....	05	B'kthroated Gr'n Warbler.....	50
Barrows Goldeneye.....	75	Acadian Flycatcher.....	15	Pine Warbler.....	50
Whooping Swan.....	1 50	Western Flycatcher.....	15	Prairie Warbler.....	30
Amer. Flamingo.....	1 00	Little Flycatcher.....	25	Oven-bird.....	20
White Ibis.....	35	Trails Flycatcher.....	15	Louisiana Water-Thrush.....	50
White-face Glossy Ibis.....	1 00	Least Flycatcher.....	10	Maryland Yellow-throat.....	12
Wood Ibis.....	1 00	Skyhawk.....	15	Yellow-breasted Chat.....	08
Amer. Bittern.....	75	Prairie Horned Lark.....	15	Long-tailed Chat.....	15
Least Bittern.....	20	Amer. Magpie.....	15	Hooded Warbler.....	50
Amer. Egret.....	30	Blue Jay.....	05	American Redstart.....	15
Snowy Heron.....	15	Amer. Crow.....	08	White Wagtail.....	10
Louisiana Heron.....	12	Fish Crow.....	35	Me-dow Pipit.....	50
Little Blue Heron.....	12	Starling.....	10	Sage Thrasher.....	50
Green Heron.....	12	Bobolink.....	25	Mockingbird.....	05
Bl'k. crown. N. Heron.....	12	Cowbird.....	03	Catbird.....	02
King Rail.....	20	Dwarf Cowbird.....	10	Brown Thrasher.....	03
Sora Rail.....	12	Yellow-headed Blackbird.....	03	Sennett's Thrasher.....	15
Virginia Rail.....	12	Red-wing Blackbird.....	03	Curve-billed Thrasher.....	15
Corn Crane.....	20	Bicolored Blackbird.....	10	California Thrasher.....	20
Florida Gallinule.....	10	Tricolored Blackbird.....	10	Bendire's Thrasher.....	75
Amer. Coot.....	00	Brewer's Blackbird.....	10	Cactus Wren.....	12
Eup. Snipe.....	25	Purple Grackle.....	05	Rock Wren.....	50
Dunlin.....	35	Great-tall Grackle.....	15	Carolina Wren.....	10
Willet.....	40	Bronzed Grackle.....	05	Lomita Wren.....	75
Bart. Sandpiper.....	30	House Finch.....	05	Bewick's Wren.....	15
Spotted Sandpiper.....	15	American Goldfinch.....	05	Baird's Wren.....	25
Lapwing.....	15	Arkansas Goldfinch.....	10	House Wren.....	05
Oystercatcher.....	25	Ch'stu't-collared Longspur.....	35	Long-billed Marsh Wren.....	05
Bobwhite.....	15	Vesper Sparrow.....	05	White-breasted Nuthatch.....	35
Texas Bobwhite.....	10	Grasshopper Sparrow.....	20	Brown-headed Nuthatch.....	25
Fla. Bobwhite.....	10	Lark Sparrow.....	05	Tufted Titmouse.....	35
Calif. Partridge.....	15	Western Lark Sparrow.....	05	Chickadee.....	12
Prairie Hen.....	20	Chipping Sparrow.....	02	Carolina Chickadee.....	15
Sage Grouse.....	75	Field Sparrow.....	03	Wren-Tit.....	50
Chachalaca.....	60	Song Sparrow.....	02	Bush-Tit.....	25
Red-bill Pigeon.....	75	Mountain Song Sparrow.....	25	Blue-gray Gnatcatcher.....	20
White-wing Dove.....	20	Heermann's Song Sparrow.....	10	Wood Thrush.....	06
Mex. Ground Dove.....	50	Sumner's Song Sparrow.....	05	Wilson's Thrush.....	12
Mourning Dove.....	05	Texas Sparrow.....	50	Russet-backed Thrush.....	15
Turkey Vulture.....	75	Towhee.....	10	Hermit Thrush.....	30
Black Vulture.....	75	Spurred Towhee.....	20	American Robin.....	03
Cooper's Hawk.....	50	California Towhee.....	10	Western Robin.....	10
Red-tail Hawk.....	50	Cardinal.....	05	Wheat-eat.....	10
Gray Sea Eagle.....	2 00	Rose breasted Grosbeak.....	10	Bluebird.....	02
Merlin.....	30	Black-headed Grosbeak.....	15	Western Bluebird.....	12
Kestrel.....	25	Indigo Bunting.....	08		

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THE OÖLOGIST.

VOL. XI. NO. 11.

ALBION, N. Y., NOV., 1894.

WHOLE NO. 109.

The Study of Bird Life.

Persistence and patience are prime essentials to success in the study of bird life. The successful student of birds must be a constant Rambler of field and forest, a patient observer in meadow, grove and orchard, along hedgerows and highways, and in shaded nooks by lakes and streams. The same beaten path will be productive of new facts every time it is traveled with open eyes and ears. If you have tried nest and egg collecting, there were doubtless many orchards, thickets or pieces of hedge which you believed you had explored carefully, yet a walk through the same localities late in autumn after the leaves had fallen, would have disclosed to you many nests that had escaped your keenest search. As you pass along the street to school on winter mornings, you can see among the bare boughs over your head old nests which you perhaps passed daily in the nesting season without discovering, though you thought at the time that you were wide awake for every tenement of your feathered neighbors.

Only those who have attempted to discover the secrets of nature know how easily may be overlooked the objects of one's search. In my earlier days a pair of Wood Pewees had taken up their quarters in a corner of a small apple orchard and I desired to add their nest and eggs to my collection. After deciding that the nest was in one of two contiguous trees, I spent several hours of several different mornings in looking for it. I finally found it almost on a line with my eye, saddled upon a horizontal branch under which I had stooped many times in passing around the tree. The Wood Pewee's nest is not an easy object to locate for its

grayish materials form an excellent mimicry to the supporting branch and it may be mistaken for a knot by an inexperienced observer.

In the same orchard a pair of Red-eyed Vireos attracted my notice by their uneasiness when I approached a particular spot. Having never examined a nest of this species, I began to look for their home, which I had read might be found suspended among the outer twigs of orchard and shade trees. I searched many minutes every day for two weeks without success. At length I gave up the quest baffled and almost convinced that I had been deluded concerning the situation of the nest. Later when peering upward to locate the nest of an Orchard Oriole in an apple tree, there before my eyes and not three feet away, hung the object of my long search, in such plain view that I marvelled at my passing it so many times without observing it. It contained young about a week old. Having found that one at last, I discovered two others the same day in the outer twigs of maple trees along the street. When you have once stumbled upon a new bird or nest, you will be surprised at the ease and frequency with which you will afterwards find others of the same species.

The nesting of the Towhee or Chewink for a long time was a mystery to me. One day I accidentally flushed a female from her nest among the sprouts almost under my feet. The mystery was understood, for I found half a dozen other nests of this species within the week.

New facts are no more easily ascertained in ornithology than in any other science, and often only after a long series of observations is some particular fact established or some old mis-

take corrected. One fortunate moment of light may reveal a truth hidden for years. One golden morning of the year may bring to your neighborhood a bird you never thought of meeting alive at home, and its acquaintance will repay you for the many previous fruitless tramps over the same localities.

Not until I had studied the birds of my home district for more than fifteen years did I there meet a Yellow-breasted Chat or a Lark Sparrow. On two fortunate mornings of last fall I secured specimens of the Harris's Sparrow, a species of which there are only two or three recorded instances of its capture in Illinois.

The requisite thing is to be on the spot at the fortunate time. It is natural for one to hold preconceived ideas concerning the birds one meets and these ideas may lead one into serious errors which may be believed for years until a day comes bringing the truth to the earnest searcher. Seeming facts which have been deduced from insufficient data may be proved untrue by prolonged and more careful observation. A bird may be eating the seeds of plants when we think it to be picking the insects from the leaves. In the Report of the Secretary of Agriculture for 1890, page 282, Mr. Walter B. Barrows tells of his supposing for years that the Swallows hovering by thousands among the barberry bushes were picking up flies when they were greedily eating the berries, as he afterward learned.

A careful training of eye and ear is essentially necessary in the equipment of the naturalist, and this training can be acquired only by frequent contact with nature herself. I would solicit every boy and girl to become a student of nature, and those who cultivate her acquaintance will learn that she does indeed "speak a various language." As one's knowledge of this language increases, the sounds of forest and meadow, of grove and stream, acquire a

meaning to the eager listener. The twitter of the Chimney Swift far above one's head revelling in the flood of sunshine and darting about in its quest of flying insects, tells of a home glued to the sooty side of a dark flue. Over in the neighboring trees the croaking of a "Rain-crow" or Cuckoo indicates the presence of that somewhat unknown yet interesting species, and its dilatory nesting habits are recalled to mind. The well known carol of a busy Wren arises at intervals and in imagination we see the little creature whisking about among the lower limbs of that large decayed maple, and we suspect that the cavity in its trunk contains a mass of sticks conveyed thither by that active busybody. Higher up among the branches laden with bursting buds, we hear the melodious notes of a Rose-breasted Grosbeak and though now out of our sight he must be gleaning the buds for his favorite insects, pausing now and then to hop to a near branch and to pour forth again his attractive notes.

He who would know birds must visit them in their haunts and there train his ear to distinguish the varied notes of praise and joy or of anger and alarm and there accustom the eye to detect the colors of the flashing wing and to discern the fitting form among the deep foliage of the woods. A knowledge of birds can be obtained from books or by the examination of specimens in collections, but bird-life can be studied only among living birds. Read all the works about ornithology you can obtain. From them you will learn much about birds and their habits, and you will be inspired to advance in this noble science, but also go out into the healthful sunshine and know for yourself our common birds. Verify what you read by your own observation, and you will learn perhaps to your surprise that the same species in different localities behaves in a very different manner,

constructing its nest differently in Illinois than when in Louisiana, or in one state nesting on the ground while in another state it may build in bushes or trees. Birds of a particular species may vary in color and in diet with change of districts, and very frequently have a different song for different seasons. If you are a farmer's boy and your daily occupation leads you out where birds may be found on all sides of you and even beneath your feet, count yourself a favored mortal and use the opportunity to form the closest intimacy with the birds of your locality. Compare their habits with what you read of them in your father's agricultural papers and reports and in your books about birds. Observation and reading are yoke-fellows in ornithology as well as in other departments of knowledge.

Bird music can not be learned by reading about it. No set of syllables can ever suggest the melody of a bird voice or the quality of the tones uttered by an exultant songster in its own free wilds. If one would recognize the various voices in the myriad choir of bird-land, he must study them separately in their setting of field, grove, and forest. Along the openly wooded streams can be heard the Song Sparrow, the Kingfisher, the Cardinal, and the Phoebe. In the open meadows are the Field and Vesper Sparrows, the Meadowlark, the Bobolink, the Bob-white, and the Black-throated Bunting or Dickcissel. In the orchards one can study the Grackles, the Orchard Oriole, the Wren, the King-bird, the Cuckoos, the Vireos, and the Robin. Along the hedges sing the Brown Thrasher, the Chipping Sparrow, the Catbird, and the Goldfinch.

In the higher shade trees are the Rose-breasted Grosbeak, the Yellow Warbler, the Baltimore Oriole, the Warbling Vireo, and the splendid Tanager. From the bushes arise the notes of the Maryland Yellow-throat, the Yellow-breasted Chat, and the Towhee. In the woods

are noted the Blue Jay, the Chickadees, the Woodpeckers, the Indigo Bunting, and the Wood Pewee, besides the many other species found in any and all of the above situations. These are only a few of the myriads of the feathered tribes awaiting one's acquaintance and study, forming an inexhaustible field, varying with every locality and every season. Each particular region invites and demands constant watch and scrutiny lest any of its features should be overlooked or neglected, or any of its characteristic notes be uttered with no appreciative ear to receive them or no sympathetic hand to record them.

P. M. SILLOWAY.

Collecting, viz: - Oölogical.

The OöLOGIST is probably the most popular journal of Natural History published in this country. Hence it is probably the best key we have to the ideas, sentiments and working methods of the rising generation of oölogists and ornithologists and to their progress and retrogression.

First as to the progress—A subscription list of twenty-five or thirty hundred names means some twenty hundred people who occasionally at least, come in contact with nature and in whom there must be regenerated some of that love for nature which is the rightful inheritance even of the child of the city. Therefore in that respect the increase which we see in their number is a truly great gain.

As to the retrogression—several writers in recent numbers of the "OöLOGIST" have called attention to it—it is the growing spirit of "collecting." Collecting for collecting's sake, collecting to increase the collection; collecting being the beginning and end of these would-be Oölogists. Oölogy is the study of eggs, or better, the shells of eggs. How little these collectors tell us about their studies of the eggs after they have once

gathered them into their possession ! They give us their notes on nidology, or the nesting habits, which is all very interesting and instructive, but which certainly might be done without collecting at all. No. I think you will agree with me that it is too much the craze for collecting. A good and very desirable craze so long as it is kept within the bounds of inanimate objects—stamps, curios, minerals, and the like ; for the collector must necessarily receive some benefit from it and no one receive any harm. But when extended to eggs, birds, and other useful animate objects it is, to say the least, unjustifiable. Looking at it from an economic and somewhat selfish standpoint, the birds are a necessary help to the farmers and the ultimate decrease in their numbers caused by such collecting is certainly perceptible ; from a sentimental and rather less selfish standpoint the birds themselves enjoy life and sensibly increase the joy and happiness of the world about them. For either one of these reasons the collector should be made to desist his marauders and give vent to his craze on some other subjects, where less harm will be done. Do not think that we wish to condemn or deprecate collecting—Not so, but I do wish that collectors should realize that the only collecting which is justifiable is that which is done for the purpose of study and is wholly secondary to study ; and I do wish that public opinion and the opinion of those collecting from a proper motive would come out in stronger condemnation of those who attempt to conceal their depredations in the cloak science and thus throw the science of Oölogy into such disrepute that of all people the Oölogist is most despised and contemptible in the eyes of the farmer and all lovers of the country. Against this each and every honest lover of nature and each and every student of nature should make loud protest.

Science is essentially knowledge. In the pursuit of any Science the first thing to be done is to collect facts ; the second thing is to gain a knowledge of the laws which govern the facts—i. e. to explain the eggs within any particular set, and a comparison of sets of the same species. This necessitates collecting, but not extensive collecting, for a good series of a few species of any one locality will afford food for thought for sometime. Hence I advocate the collecting of a large number of eggs of a few species—twenty sets of one species of Hummingbirds eggs rather than one set each of twenty species. If one has seen an egg of any one species of Hummingbird he has seen an egg which will pass for a sample of almost all other species, and he would know little more, had he samples of each of these various species, for he would be simply verifying a fact well established by hundreds before him—that there is little difference, save in size, in all the various species of Hummingbirds. Were all eggs of any particular species of birds laid under precisely similar circumstances we might expect the eggs to vary as little as the bird which laid them, their existence and their relations to one another. For the Oölogist by far the most accurate and convenient method of collecting his facts is to collect eggs. Each egg is a bunch of facts. For example take the Catbird's eggs we have right before our eyes the fact that it has a thin hard shell, white on the inside, green on the outside, longer than broad, more pointed at one end than at the other—and so on. Now it is for the scientist to explain these facts. He will probably satisfy our demands by saying, it is thin in order that air may pass through for the growing chick, hard that it may not be crushed by the setting mother, green because that color blends with the green of the bush-

(Continued on page 337.)

Leach's Petrel.

In writing an account of a day's outing it is almost invariably the custom to make the first few sentences in regard to the weather. To most persons, the state of the weather undoubtedly does have a great deal to do toward the enjoyability of the trip, and to follow this custom I will say that on the twenty-second of June, 1893, I do not remember whether it was very warm or very cold or whether the sun shone or not. All I do recollect about this all-important subject is that there was enough breeze to make the little fishing boat lean over in a most delightful manner, as we hummed along toward our destination.

The "We" included Mr. Chas. K. Reed, the fisherman, who received three dollars for the use of his boat with his services thrown in, and myself. Now Mr. Reed spends about fifty weeks of the year mounting birds under his "Patent Oval Convex Wall Shades"; the other two weeks he always plans to spend hunting for eggs and for recreation. So for about a week we had been wandering around among the islands of Penobscot Bay, Me. We found plenty of recreation but not so many eggs. Nevertheless we were having a good time and on this particular day we were bound for one of the outer islands, to see what we could do with the Leach's Petrel or as they are known among the fishermen the "Cary Chickens."

About eleven o'clock we drew near the island. When half a mile from it we knew there were plenty of birds there, although not one was to be seen, for the wind coming to us from over it brought to our nostrils the peculiar musky odor which these birds always give out. The boat was soon anchored in the lee of the land and embarking in the dory we rowed to the shore, making a landing without much difficulty.

The island was about ten acres in extent and covered with a growth of grass and weeds. A couple of lobster fishermen had made it their headquarters and remained there except in the coldest of the weather. They came down to the shore to inspect us, for visitors were scarce at that lonely spot.

We had found out by experience that the best way to make friends with these Penobscot Bay fishermen was to tell them one's history and business without being "pumped" very much for it. So we immediately told them that we were "rusticators," which is a name they have for city people who are pleasure-seeking in the country, and that we were spending a few days around among the islands looking for sea birds eggs for our collections. They were immediately interested and told us to hunt the island over and welcome but were afraid we would not find much but "Cary Chickens."

"The Cary Chickens are just what we would like to get" we answered.

"Take the pesky things," said one of them, "we'll be glad to get rid of them; they bother us so some nights that we can't sleep." "Yes," added the other, "after dark they are as thick as skeeters and we can kill any number by throwing sticks in the air; they keep a squeaking going all the time that used to bother us dreadfully about sleeping."

In its breeding habits the Leach's Petrel is a nocturnal bird, coming and going to its nesting place only after dark.

Upon turning our attention to the island we found it completely honey-combed with the burrows of the Petrel; some within a few feet of the fishermen's rude shanty; burrows here, there, everywhere; hundreds of them, thousands of them wherever there was soil enough to dig into; but where were the birds? Not one was in sight, not a wing fluttered over the island, not one in sight over the sea.

Rolling up our sleeves and getting down on all fours we let these meditations take care of themselves, while we started our arms on an exploring expedition into some of the holes. Soon the first egg came to sight. What a beauty it was before it was blown with its delicate pinkish color and the little ring of fine spots around the large end. I did not stop long to admire it, for I wanted some more. Soon another beauty was unearthed and then another and so on until I lost count. We began to hunt for easier places to dig, where the earth was softer, and there found the burrows thicker, sometimes running together.

I noticed that several had recently been dug out, and wondered what collector had visited the island. Upon inquiring I learned that he was a resident of the place and he soon put in an appearance in the shape of a large Newfoundland dog. Seeing all hands digging doggie seemed to fear that his rights were being encroached upon. Sticking his nose into a hole, he sniffed once or twice and deciding that it contained a bird, a few strokes with his powerful paws and it was unearthed; then a crunching of little bones and the poor chickey had disappeared where many a one had gone before. For the fisherman told us that the dog lived almost entirely on the petrel in the summer time.

All hands, including the dog, resumed digging. We were just at the right season, for nearly every hole contained an egg. In none of them did incubation appear to have advanced more than a week, but it was hard work digging them out although the burrows were not very long, ranging from two and one-half to three and one-half feet in length, and very crooked, often making a complete double on themselves, and ending up near the entrance and sometimes directly underneath it.

The nest, which was placed at the

end of the burrow, was simply a layer of dried grass, very slightly hollowed. One egg was the full set, and I have never known of their laying more. The bird was generally on the nest; although I saw a few containing fresh eggs which the birds had left to take care of themselves, probably not yet being ready to begin sitting. In a few burrows both the male and female were present, and in every such case there was no egg. Both birds assist in incubation, relieving each other at night, for out of two dozen birds taken from the nests there were two or three more males than females in the lot. In their habits they are very cleanly, there being no filth inside or around the entrance to their homes. With the exception of a few unfinished burrows, there was no earth left around the entrance. The same sites are probably used year after year, for only a few were found vacant.

The birds when taken from their nests, appeared stupified and tried to find a place in which to crawl out of sight. Some would simply tuck their heads under a stone, or piece of sod and then imagine themselves safe from pursuit; others would run a few yards through the grass and then take flight. When once in the air, they would circle around once or twice to get their bearings, and then start for the open sea and were soon lost to sight. While over the land their flight much resembled the Night hawk's. I did not hear them utter any note.

There is one dirty habit these birds have, which I wish they would remedy before I visit them again. When you pick one up to examine it, it blinks its eyes a few times in a stupid sort of a way, opens its bill and gasps once or twice, and then with a funny jerk of its head, vomits forth about a teaspoonful of oil over your hands and clothes. This oil is quite clear and varies in color from light straw to reddish-yellow, it

is what gives the birds that striking odor. A little of it goes a good ways. Eggs and skins of these birds which have been kept for years still retain the scent.

There is a very odd thing which the fishermen told about them, and both told the same story. I will repeat it and the readers of the, 'OÖLOGIST' may take it for what it is worth. They said that early in the spring, before the ground thawed, they dug out several of the Petrel which were apparently dead, but upon being placed near the fire, they soon completely revived. Quite a number of holes were dug into, and most of them contained birds in this condition. The fishermen were of the opinion that many birds remained in this state during the entire winter. As for myself, I hardly like to believe it and I would be thankful to the person who looks it up and finds out the truth.

Besides the Petrel, there was very little else on the island. A few Common Tern hovered over one end; the Song and Savanna Sparrows chirped around in the grass and stones. Three sets of Spotted Sandpiper were taken.

On a rocky point several Black Guillemots evidently made their home, and had nests underneath the rocks, but one would need a derrick to get at them. I did not try to get any, for I had scoured several sets two years before on another island in the bay.

Having gathered all the eggs I cared for I wandered over to where Mr. Reed was; he too, was satisfied. He did not look so fresh as he did when we landed; he did not look as clean; in fact he was decidedly dirty. His ears and eyes were full of dirt; his nose was smutty; his arms and hands were scratched and his clothes were torn. He said he bet I was as dirty as he was; we left it to one of the fishermen, who said he would have to toss up a quarter to decide. No one had that amount of money, so we are still in doubt.

It was with reluctance that we left the island with its thousands of birds sitting on their eggs just underneath the surface. How I would like to have remained over night and watched the strange scenes that would then occur, when thousands of birds would come from their burrows and as many more would come from their distant flight over the sea.

It was impossible however to remain longer, but as I watched the little island fading from sight over the stern, I made a vow that if ever I had an opportunity to remain in a Petrel village over night, I most certainly would improve it.

H. T. VANOSTRAND,
Millbury, Mass.

Nesting Habits of the Chestnut-sided Warbler

As I understand it Mr. Editor you do not desire notes on our common birds as the habits have been repeatedly described in your columns. Therefore in describing this species there is a good chance that my writing will go for naught, as it is a well known Warbler. However, I will chance a few pages of manuscript as I believe the notes to be of interest to many who happen to live in sections where this agreeable undemonstrative little Warbler is rare.

Of the family *Sylncolidæ*, there is, perhaps no other of the long known members who has been recorded as irregularly, both as to locality and date of arrival as this. If my readers will take the time to look over a goodly number of authorities it will be found that discrepancies occur concerning this species. Audubon, I believe and several other prominent ornithologists consider this Warbler quite rare. Then, too, there are observers who have found the bird abundant, and again very rare. In fact, this condition, due to a change of location for breeding, is quite noticeable in this Warbler.

It is fair to allow that the requirements of the species during the nesting season cause the birds to change their location, as we are not disposed to admit that birds vary their selection without reason. Nevertheless repeated instances in the experience of others as well as in the case of my own records, indicate that the Chestnut-sided sometimes fails to visit a neighborhood where it was formerly abundant, and from no reason that can be discovered by careful study. Careful observations have fully demonstrated that the settlement of a locality tends to increase the number of species of birds, and in those sections not too thickly inhabited by man it is safe to estimate that one-half more species of birds are now found than were present before the locality was invaded by settlers. As a rule, so far as my experience goes, the Chestnut-sided selects partial clearings for its summer home, or where clearings have been on low land and the weeds, vines and underbrush have sprung up on old burns and slashings. In situations of this nature I have found the species abundant in three counties in the Lower Peninsula south of 44 degrees north latitude. A further clearing of the land and its cultivation of course results in the removal of the birds, but the species strangely enough sometimes leaves a section, admirably adapted to their wants, and without a reason as yet discovered. Often recorded as a migrant and passing to the North, by young observers, when a little careful inquiry would show that it is a summer resident in the neighborhood.

My earliest date of arrival is April 25th and one season it was not recorded until May 12th, but I feel confident that the birds are always within our state boundaries by May 1st and perhaps earlier. These late notes are generally not exact and result from carelessness or lack of sharp eyes on the part of the recorder.

Soon after arrival the simple yet characteristic song is heard, and is daily offered until about the middle of July after which they are silent excepting for their call notes, until well toward the close of August at which time the song is occasionally heard. But at this second period of song there is seldom or never a prolonged musical effort and the notes are not uttered with the heartiness of the vernal utterance.

The more common song is: *che che che che we we we o we*. Then again the following syllables represent the notes: *choo a choo a che che o wee o wee* rapidly uttered. Still another song not as often heard, and difficult to express in syllables, goes something like this, *tsis tsis tsis chee ah*. The first part *tsis* is sometimes only given once, and again five or six times, while the last part of song is varied in key.

It is fair to consider this bird essentially a bush warbler as it confines itself to low trees and bushes, and is rarely found in tall trees excepting during migrations. While nesting it is more commonly found about thickets and bramble patches, often near the edges of streams or lakes and ponds and generally on or near low dark soil; still I have found it breeding in hazel thickets on high and sandy tracts. Generally the species prefer the edges of elm and ash forests for its nesting grounds and most of the nests coming to my notice were in partial clearings where the raspberry and blackberry bushes formed thick clumps.

In favorable seasons a good many nests were discovered and I recall two years when at least thirty nests were found, all in situations as described above. My first nest was discovered in Kalamazoo Co., on May 20, 1874. It contained four fresh eggs. This was an early find and I never took another complete set so early in the month. For five years the birds nested regularly in my locality, but not a nest has

been found in the neighborhood, latitude about 42-20 North, since 1878. However, a nest was discovered a few miles from the old place, within the last year or two. The best time to secure fresh eggs was in early June, and on the first of the month, 1877 five nests with eggs rewarded my search.

The nests are generally placed from three to four feet up when in small bushes, and sometimes in a crotch quite six feet from the ground, while many nests have come under my observation not over one or two feet above the ground. These lowest sites were usually in recumbent raspberry vines. The structure is not well put together, and will compare fairly well with nests of the Black-throated Blue and Hooded Warblers as to durability, and though lacking the nicety of lining of the former and the bleached leaves of the latter, it is composed of much the same material, namely, dead grass coarse and fine, fine roots, occasionally grape vine strips rarely a few fine twigs. Some nests contained horse hair. Oliver Davie leads one to think that the nest somewhat resembles that of the Yellow Warbler, but it is fair to assert that they are in no respect alike, either in appearance or material.

In 1878 and 79 I found this bird a common summer resident of Kent and Ottawa counties, latitude about 43 degrees North. The years 1880-83 inclusive the Chestnut-sided was summering in Montcalm and Newaygo counties. In 1885 and 91 I met with this bird on Macinac Island, and have found it also on the Northern Peninsula as well as in the counties on the Southern boundary of the state.

The birds generally select the margins of pineries at the north but prefer the clearings where there is a second growth. If there has been a burning the birds always select it and are most at home in spots chosen by the Prairie

and Mourning Warblers. White-throated Sparrows and Juncos.

The eggs are three or four in number more often three, but five eggs have been taken. Commonly speaking they are white, spotted with reddish-brown. But to describe a series of eggs would occupy much space, for they vary greatly. Sometimes there are but few spots on the surface, and again they are very numerous and some specimens are so blotched at the larger end that the whole butt is covered with reddish-brown or a kind of purplish or lavender. The dimensions of the eggs do not differ to any great extent and in my series of measurements there was but slight difference.

On being flushed from the nest of eggs the old bird drops almost to the ground and flits into a thicket near by and usually remains out of sight while the stroller is at hand, and the bird's presence is only known by the call-notes uttered from the thicket. When the eggs are well advanced in incubation or after the young are hatched the old birds become quite uneasy at our presence and flit about and chirp excitedly.

Both birds set upon the eggs, as with, I presume all the Warblers. I am acquainted with seven members of this family, where the old birds join issue in the duties of incubation.

MORRIS GIBBS.

The Ornithology of a Church Yard.

About three miles south-east of Berwyn and fifteen from Philadelphia, nesting in a secluded hollow of a quiet neighborhood, stands a quaint old building known as the St. David's Episcopal church.

Over the large chancel window we read "A. D., 1714." In this little church, men whose names and deeds are known to all the country; have worshiped, in the time gone by. On all sides of the church, ay even under

the very doorstep, foundation and aisle, lie the dead of a century and a half and more. Here lie a number of revolutionary patriots, whose graves are unmarked save by a number of small flags. Their names and deeds alike forgotten. A modest block of marble marks the last resting place of the bones of "Mad Anthony" Wayne of whom the Indian chief said "He never sleeps" and who threatened to "rise from his grave and fight them" should the Indians dare break their treaty. At the time of his death he was commander-in-chief of the United States Army. Of others I have not space to write. In this building the British redcoats, at one time quartered their horses. Large pines, oaks, spruce, cedars, gum and various other trees, many of which have seen a hundred years roll by, rise above the tombs and church. Many plants and shrubs of old fashioned and little known species are scattered about under the wide spreading trees. While the earth is as white and cold as the tombstones, the birds alone break the prevailing silence and monotony. The noisy "*caw caw*" of the crows as they fly in large masses and hold front to their feeding ground, in the early morning, or back to roost in long seemingly endless trains, in the dusk of evening; the sweet, mellow whistle of the Meadowlark. "*We-te-see-re-ee*," the Sparrow Hawk's exaltant cry, shrill and savage; the cheery how-do-you-do of the Black-capped Chickadee, Nuthatch, or Downy Woodpecker, uttered in a variety of language, but none the less hearty for that, with now and then the notes of a Flicker given in his own rollicking manner, the "*Free-uk chow-chow*" of the Cardinal, the "rusty wheelbarrow" notes of the Blue Jay, or the "*tsep*" of the Song Sparrow, in the swamp beyond the wall, little else is heard lest it be the soft silvery notes of the Juncos and Tree Sparrows as they talk confidentially among themselves; or

when the shadows commence trailing, the moaning notes, so sad and wild, of the Screech Owl, from the evergreens. The cry of this bird invariably turns the listener's thoughts to that which is solemn and grave.

But with the spring comes the sweet-er musicians to raise their broods and to pour out their songs of love, of exaltation and of triumph. Very early comes the Bluebird, Robin, Goldfinch, Cedar Waxwing, Purple Grackle, Killdeer and Spotted Sandpiper, and not to leave until very late in the year. The Phoebe, Mourning Dove, Red-winged Blackbird, Crested Flycatcher, Kingbird, Red-eyed, White-eyed, and Warbling Vireos, Field, Chipping and Vesper Sparrows, Indigo Bunting, Brown Thrasher, Wood Thrush, Catbird House Wren, Yellow-billed Cuckoo, Chimney Swift and Barn Swallow following after according to their nature and the weather.

The flute-like notes of the Wood Thrush leads, with the scarcely less wonderful songs of the Brown Thrasher, Catbird, Robin, Vesper Sparrow, Indigo Bunting and others to keep the air vibrating with music, and the grand chorus of all the remaining birds to add volume to the strain, to make up the balance of the noise or complete the pastoral effect, the eye and ear are at once charmed. As I look and listen I think what a resting place this would have been for the "Father of American Ornithology," the great Alexander Wilson, whose wish it was that he might be buried where the birds could sing over his grave.

Midway, although not by the most direct route, between the homes of Audubon and Wilson; there is little doubt but that both of these great Ornithologists have traversed this same ground in their wanderings and search for new and unnamed species.

FRANK L. BURNS.

Notes from Audubon's Biography.

FRED W. PARKHURST.

Part VI.

On the first day of August, 1836, Audubon and his son took passage on the American Packet ship the "Gladiator," commanded by Thomas Britton, Esq., and proceeded on their voyage to New York. Arriving in New York they went directly to the house of Audubon's brother-in-law Nicholas Berthoud. Leaving his son in New York Audubon went on to Boston, where under the roof of his generous friend Dr. George C. Shattuck he enjoyed life for a while. Through the kindness of Dr. Shattuck Audubon secured several more subscribers in Boston, and made the acquaintance of Thomas M. Brewer, from whom he received many kindnesses. Pushing on to Salem he secured a few more subscribers and formed a number of acquaintances. Soon after he returned to Boston and heard of the arrival of Thomas Nuttall from an extended journey over the Rocky Mountains to the Pacific Coast. Nuttall generously gave Audubon from the store of specimens which he brought with him all of which Audubon was unfamiliar with and which he desired to figure in the "Birds of America."

From New York Audubon went to Philadelphia, where Dr. Townsend's collection was, which he was very anxious to examine. On his arrival there he found Dr. Townsend out of the city, but obtained access to the collection. Thomas Nuttall had not yet returned, and loud murmurs were uttered by the *soidisant* friends of Science, who objected to Audubon's examination of the collection, and would not consent that he should portray and describe those specimens which were not included in the list of American Fauna. It was agreed at last that he might *purchase duplicates*, provided the specific names agreed

upon by Audubon and Nuttall were published in Dr. Townsend's name. The latter part of the agreement was satisfactory to Audubon, as he was never eager to be the discoverer of new species. Of his treatment by those so-called scientists in Philadelphia Audubon remarks; "Let me assure you, reader, that seldom, if ever, in my life have I felt more disgusted with the conduct of opponents of mine than I was with the unfriendly boasters of their zeal for the advancement of ornithological science, who at the time existed in the fair city of Philadelphia."

On a journey from Louisville to Henderson, performed during very severe weather, in company with Mr. T. —, a foreigner, Audubon's companion, spying a beautiful animal marked with black and pure yellow, and having a long bushy tail, exclaimed, "Mr. Audubon, is not that a beautiful squirrel?" "Yes," replied Audubon, "and of a kind that will suffer you to approach it and lay hold of it if you are gloved." Mr. T. —, dismounting, took up a dry stick and advanced toward the animal, with his large cloak floating in the breeze. He approached the animal carefully and gently laid his stick across the skunk, for such the "beautiful squirrel" was. The pole-cat raised its fine bushy tail and showered such a discharge of the fluid given him by nature as a defence, that Mr. T. —, dismayed and infuriated, began to belabor the poor brute. The swiftness and good management of the skunk, however, saved its bones; and as it made its retreat toward its hole, it kept up at every step a continued ejection, which fully convinced the gentleman that the pursuit of such squirrels as these was at the best an unprofitable employment.

From Philadelphia Audubon bent his course toward Baltimore, where he spent a few days. Before leaving Philadelphia Audubon's friend Edward Harris had promised to meet him in Char-

leston for the purpose of accompanying Audubon and his party along the western coast of the Floridas, and the Gulf of Mexico at least as far as Galveston Island in Texas.

On his arrival in Washington Audubon presented himself to the Hon. Levi Woodbury, Secretary of the Treasury, a gentleman of learning, and one who had always been favorably inclined towards Audubon; and he at once assured them that he would if possible grant them one of our Revenue Cutters for the intended voyage. The war between the Seminole Indians and the citizens of Florida, which was raging fiercely at the time, tended strongly to frustrate all their plans, as every available vessel of this class which was under the control of Mr. Woodbury was engaged on the coast of the Peninsula. Audubon then called on President Jackson, from whom, since 1819, he had received many favors, and he also assured Audubon of his wish to be of assistance to him.

They now proceeded towards Charleston, S. C., travelling the latter part of the way on a most extraordinary railroad, Audubon says, and reached in safety the house of Audubon's worthy friend Dr. John Bachman. It was indeed a happy meeting, for ever since their acquaintance was commenced in the streets of Charleston the two had been the best of friends. At Dr. Bachman's house the box containing Dr. Townsend's precious series of birds was opened, and while awaiting the arrival of Edward Harris, Audubon drew upwards of seventy figures, and was assisted in the finishing of the plants, branches and flowers which accompanied each figure, by Dr. Bachman's sister-in-law Miss M. Martin. While in Charleston the agreeable tidings was received that Audubon had been elected a member of the Ornithological Society of London. Soon afterwards Edward Harris put in his appearance, but no

Revenue Cutter, and the spring being very near they pushed on to New Orleans, where Audubon had been informed by Government letters that he should find a vessel. After several days of hard travel they arrived at Montgomery, Ala., and secured passage on a steamer bound for Mobile, and reached there the following day. Two days were spent in Mobile examining the neighborhood, after which they proceeded to Pensacola. Here Audubon made the long sought acquaintance of Mr. Innerarity, to whom he had letters from his friend Alexander Gordon; and who introduced Audubon to all persons who were likely to forward their views. The next morning Mr. Innerarity accompanied them on board the United States frigate the "Constellation," and presented Audubon and his little company to Commodore Dallas, to whom Audubon had letters of introduction from the Government. The gallant Commodore received them with great kindness, and, after reading Audubon's letters, assured him that as soon as a cutter could be spared it should be placed at his service, and that the information would be transferred to him through the medium of the Collector of Customs at New Orleans or Mobile. After searching the country around Pensacola they returned to Mobile and proceeded to New Orleans by steamer. We will follow Audubon on his Gulf trip in the next number.

(TO BE CONTINUED).

Grasshopper Sparrow in Ontario Co., N. Y.

B. S. BOWDISH.

On June 3d. of the present year, a bright and beautiful day, I started forth on a quiet stroll of investigation among the feathered denizens of wood and field. As I left the highway and started across a clover meadow, my attention was attracted by a somewhat suspic-

ious looking clump of stubble, and investigating it I found myself gazing into a nest which I at first took to be an unusual one of the Grass Finch, but which a second look convinced me to be a strange one to me.

It was composed of fine dry grasses, and a portion of these intertwined with the stubble in which the nest was situated, formed a very neat canopy, with an entrance on the side, facing the west.

In removing the nest the canopy seemed to settle and unite with the rim. The nest exhibited the following measurements: Diameter outside $4\frac{1}{2}$ inches, inside $2\frac{1}{2}$ inches; depth outside 3 inches, inside $2\frac{1}{2}$ inches.

The contents were a beautiful set of five eggs, of a clear white ground color, thickly marked with fine specks and larger blotches of pale reddish-brown and lilac, congregating most thickly about the larger end, where in several cases they formed a quite distinct wreath. They were what might be termed pyriform-oval in shape.

No bird was around, and the eggs being cold and damp, the nest had no doubt, from some cause been deserted. Incubation proved to be fresh.

The nest was sunk in the ground, the canopy and a firm, well built rim about one-half inch wide being above the surface.

Although I had never actually observed the Yellow-winged Sparrow breeding here, I knew it to be a summer resident, and had no hesitation in ascribing the identity of this nest to it. The eggs would average in size .75x.55.

On June 23d I was convinced of the accuracy of the identity of this set, beyond a doubt, as while walking along a path through a clover meadow, I saw seated on a nest in a clover tuft beside the path, one of these beautiful little birds. It never left the nest till my hand was almost upon it, when it darted off in a quick zig zag flight for a few rods and settled in the grass.

With the exception of the canopy covering, which in this case was wanting, nest and eggs were the exact counterpart of the first ones.

Leaving the nest undisturbed, I next morning went with my gun and secured the bird as it left the nest. It proved to be the *mule*, of about the typical coloring, with the usual bright yellow wing edging, but with less of a yellowish cast than is usual, in the median line, intercapsulars, and under feathers.

The nest measured: Diameter outside 4 inches, inside $2\frac{1}{2}$ inches; depth outside 3 inches, inside $2\frac{1}{2}$ inches. Like the first nest, the bottom was frail and the remainder of the structure rather more poorly built. Incubation in this set was advanced.

This bird is of quiet inconspicuous nature, its coloring from a distance rendering it similar to the really much larger Grass Finch in the eye of the casual observer, its song blending with that of winged insects, (causing it to be called Grasshopper Sparrow) and from these causes it often remains unsuspected where really not uncommon.

The stomach contents of the above specimen partook of both insect and vegetable nature.

PHELPS, N. Y., Sept. 2, 1894.

COLLECTING VIZ :— OÖLOGICAL.

(Continued from page 328.)

es where it lays and makes it less conspicuous, and as to shape we see a most plausible explanation in the Sept. OÖLOGIST—but why white on the inside, and why such variation in shape and size of egg in the same nest. In connection with Oölogy there has been a great amount of collecting done, but very little studying. Coloration is an especially fertile field—particularly so is the coloration of sets—a comparison of the circumstances are different and the eggs are different. With a fairly large

series of sets of any one species, accompanied by full and careful data it is not an unreasonably difficult task to explain the variations—in short there is very apt to be more food for thought in a series of one species or several closely related species than in a few samples of a great many species.

The study of eggs of the same individual bird is probably the richest field in Oölogy, but one which is only open to those living in the country.

Finally in order that any good at all may be gotten from a collection, full, careful, and absolutely accurate data must accompany each set.

We are none of us too careful or thoughtful. Let us all consider more fully each time we take an egg that we are destroying Nature's blithest sweetest creatures, the greatest friend of the farmer and all dependent upon him. Wrest your heart from your cabinet and let it throb to the pulse of Nature's.

GEO. H. GRAY,
Baltimore, Md.

OCTOBER CONTEST.

Forty-six Judges.

1. A Study of Nests, 210.
2. Traill's Flycatcher, 142.
3. Notes from Audubon's Biography, 129.
4. Nesting Habits of the Golden-winged Warbler, 112.
5. An Oölogist of Early Day, 73.

The Judges prizes were awarded as follows:—

1. No. 18—H. E. Ward, Kensington, Ills.
 2. No. 25—H. Gould Welborn, Lexington, N. C.
 3. No. 42—Alex. H. Noel, St. Louis, Mo.
 4. No. 3—Walton Mitchell, St. Paul, Minn.
 5. No. 13—Harold M. Holland, Galesburg, Ills.
 - No. 16—Frank N. Wright, Virden, Ills.
 - No. 33—Wm. C. Thro, Elmira, N. Y.
- Judges No's 18, 25 and 42 named the winning articles in their *exact* order and No's 3, 13, 16 and 33 placed them 1, 3, 2, 4, 5.

All prizes were mailed on November 8th.

THE OÖLOGIST.

A Monthly Magazine Devoted to
OÖLOGY AND ORNITHOLOGY.

FRANK H. LATTIN, Editor and Publisher
ALBION, N. Y.

Correspondence and items of interest to the student of Birds, their Nests and Eggs, solicited from all.

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Your decision must be mailed us not later than the *first* day of December. Write on back of a postal card the five articles which *you* have decided to be the *most valuable, instructive and interesting* in this number of OöLOGIST and mail to us. Number the articles in the order which you think the prizes should be awarded.

We give our Judges five prizes having an aggregate value of over \$5, one to each of the five whose decisions are nearest the final award of Mss. prizes.

I Want An Egg Collection!

I have had hundreds of them during the past fifteen years ranging in value from a "few cents" to thousands of dollars but, I never picked or set aside—in all these years or from all of these collections—a single specimen for a personal collection, although I've frequently thought of starting one. I have the fever real bad but find that in order to allay the same that I must begin way back with the "small boy" in the earliest stages of forming an oölogical collection and that as a starter I shall require sets of such rare species as the Robin, Catbird, Brown Thrasher, House Finch and even the English Sparrow.

Hence I have decided that during the first thirty days of my collection's career, that I will accept strictly A No. 1 full and complete sets of *any species* recognized as belonging to the North American Fauna.

The authenticity of these sets must be unquestionable and the data accompanying the same must be very complete.

I prefer (am not positive on these points however) to receive sets of '94 collecting and direct from the original collector.

Now if you have one or more sets which you think would please me and which you will exchange at *full* Standard Catalogue rates for anything I offer below at prices quoted I want them and wish that you would send on at once *prepaid*.

Remember I will only accept such sets as I have designated and on conditions named and although I will accept any number of sets from a single collector—I will not accept more than a single set of a species from the same party—I also reserve the privilege to return any set not up to my standard and also the duplicate sets of many species which I shall undoubtedly receive, should I so desire. Your specimens are to be sent at your risk and *prepaid*. I will send all return packages prepaid and at my risk.

This offer is a very broad one and will never be repeated—it will hold in force until Dec. 15th not a single day later.

I have no time to correspond over this matter, hence do not write me in relation to the same unless your letter is accompanied with specimens.

Faithfully,

FRANK H. LATTIN.

The following are the articles and the prices at which I offer them in exchange for the above:

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"Birds of Michigan," Cook.....	1 00	5 Spar Scarf or Stick Pins, all different.....	1 00
"Standard Catalogue of N. A. Birds".....	35	Spar Charm containing views of World's Fair.....	50
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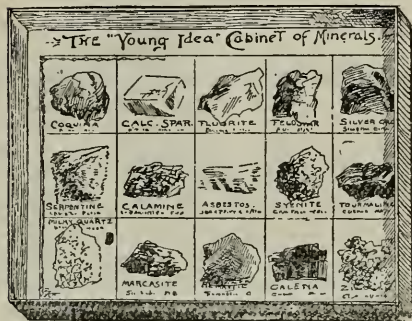
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Notice is hereby given that the partnership lately existing between Frank H. Lattin and Walter F. Webb under the firm name of F. H. Lattin & Co., was dissolved on the 31st day of July, A. D., 1894, by mutual consent.

FRANK H. LATTIN.

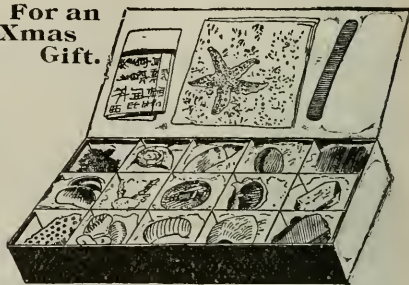
WALTER F. WEBB.

Important: Your letters must never be addressed to F. H. Lattin & Co., but to either FRANK H. LATTIN or WALTER F. WEBB, which ever you may wish to receive the same. All matters pertaining to the OÖLOGIST must be addressed "LATTIN". By heeding this "pointer" you may save both yourself and the party you may wish your letter to reach both delay and possible unpleasantness.

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VOL. XI. NO. 12.

ALBION, N. Y., DEC., 1894.

WHOLE No. 110

Wants, Exchanges, and For Sales.

Brief special announcements. "Wants," "Exchanges" "For Sales," inserted in this department for 50c per 35 words. Notices over 35 words, charged at the rate of one cent per each additional word. No notice inserted for less than 50c. Terms, cash with order.

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NOTICE.—Wanted: Rare Birds' eggs, in sets, with complete data, with nests, if possible. Also fine skins. Offer perfect butterflies from India, C. & S. America, Europe, etc. LEVI W. MENGEL, Reading, Pa.

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NOTICE.—As the fire which destroyed my business also destroyed all my records, I would like all persons who owe me eggs or other specimens as well as those whom I owe to send me their addresses and state what is due them or me. W. A. OLDFIELD, Port Sanilac, Mich.

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ANNOUNCEMENT Extraordinary! Readers of the OÖLOGIST will be pleased to see for the first time a good half-tone portrait of Editor Frank H. Lattin, which appears, together with a reminiscent biographical sketch by H. R. Taylor in the September number of the Nidologist. The price for a "sample copy" has been invariably 10c, but out of compliment to the readers of the Oölogist, who all want "Lattin's" picture we will send a copy of this number for 5 cents, cash or stamps. Other features and illustrations "above par." Write at once. THE NIDÖLOGIST, Alameda, California.

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I HAVE for exchange the following sets with complete data, for sets not in my collection, A. O. U. No's 608 1-3, 221 6-4, 622b 1-4, 32 1-1, 533c 1-4, 456 1-5, 713 1-5, 508 1-5, 627 1-3, 320a 1-2, 725 1-2, 423 1-5, 622a 1-5, 566 1-4, 462 1-2, 652 1-4, 581c 1-3, 20 1-1, 511 1-4, 120c 1-1, 254 1-3, 429 1-2n, 430 1-2n, 602 1-2, 510 1-4, 333 1-2, 410 1-4, 758 1-4, 519b 1-3, 706 1-4, 734 1-2. Sing. 74, 71, 201, 492, 666, [76], 207, 214, 133, 300, 316, 373, 378, 412, 481, 501, 420, 604, 70, 465, 721, 721a, 423, 444, 443, 477, 701, 766, 488, 507, 498, 13, 237, 608, also lot of foreign eggs in sets with data. C. ALLEN ELY, Perrineville, N. J.

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WANTED.—Books on natural history, taxidermists' instruments and printing press. Can offer for same eggs, sets and singles, shells and curios. FRED H. ANDRUS, Elkton, Oregon.

TO EXCHANGE with western and southern collectors, first class skins with full data. Send lists and receive mine. Reference, Prof. Ludwig Kumlien. Address, EMERSON ATKINS, Milton, Wis.

TO EXCHANGE. 41-5, 77 1-3, 79 1-1, 212 1-8, 390 1-4, 725 1-6 5-5, 613 1-4, 652 1-4, 498 4 1 584 1-4 for sets. FREDERICK HILL, Lyme, Conn.

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FOR SALE.—At one-half Standard Catalogue rates. A. O. U. Nos. 61-6, 1-10, 1914, 221 1-7, 263 1/2, 292 1-6, 1-7, 1-10, 413 1/2, 462 1/2, 529a 1/2, 1-5, 556 1/2, 1-5, 560a 1/2, 588b 1/2, 2 4, 615 2 5, 721a 1-5, 1-7, 743 1-5, 1 1/2, 761a 3-3, 1 1/2 and singles of 292, 297a, 485, 556, 567a, 599 and 615. I offer one each of *Helix fidelis* Grey; *Helix Columbiana* Var. Lea., *Selenites Vancouverensis* Lea., *Goniabasis plicifera* Lea., *Acteolus Nuttalli* Hald., *Paludina arbutorum* Lea. and *Margaritina Palsedina arbutorum* Lea. and *Margaritina margaritifera* Linn., for 25 cents. Three of each, 50 cents. Seven of each, \$1.00. Five Chrios, 10 cents. FRED H. ANDRUS, Elkton, Oregon.

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has caused notices to be posted, requesting all persons sending letters or packages through the mail to put their name and address thereon.

The best way to do this is to stamp it on with one of

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He sells them cheap. Write for prices.

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EGGS! EGGS!! EGGS!!!

Prices Cut in Two!

Having recently embarked in the curio business and wishing to obtain the address of every *live* collector in the country, for the next 60 days I will make the following discounts. All eggs are strictly first-class. In a great many instances data can be furnished with single eggs. List of line sets sent on application. Parties sending me cash to any amount over 75c can select eggs to twice the amount. On an order of \$5.00 you can select eggs to the amount of \$10.50. On an order of \$8 you can select eggs to the amount of \$17 or on an order of \$10.00 you can select eggs to the amount of \$25.00

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Puffin.....	20	Amer. Osprey.....	50	Sharpe's Seed-eater.....	1 00
Murre.....	20	And. Caracara.....	1 00	Dickcissel.....	05
Calif. Murre.....	20	Long-ear Owl.....	35	Scarlet Tanager.....	25
Kittiwake Gull.....	25	Screech Owl.....	40	Summer Tanager.....	25
Amer. Herring Gull.....	20	Tex. Screech Owl.....	40	Purple Martin.....	12
Ring-bill Gull.....	25	Burrowing Owl.....	15	Cliff Swallow.....	03
Laughing Gull.....	20	Road-runner.....	20	Barn Swallow.....	05
Franklin's Gull.....	30	Yellow-bill Cuckoo.....	10	Tree Swallow.....	15
Cabot's Tern.....	40	Black-bill Cuckoo.....	15	Bank Swallow.....	03
Caspian Tern.....	40	Baird's Woodpecker.....	75	Cedar Waxwing.....	10
Common Tern.....	08	Gold-fronted Woodpecker.....	50	Loggerhead Shrike.....	08
Black Tern.....	10	Flicker.....	03	White-rumped Shrike.....	08
Sooty Tern.....	25	Nighthawk.....	40	Red-eyed Vireo.....	10
Noddy Tern.....	50	Western Nighthawk.....	40	Warbling Vireo.....	15
Fulmar.....	50	Texan Nighthawk.....	40	Yellow-throated Vireo.....	25
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Gannet.....	35	Scis-tail Flycatcher.....	10	Prothonotary Warbler.....	25
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Farrallone Cormorant.....	30	Crested Flycatcher.....	10	Parula Warbler.....	20
White Pelican.....	35	Phoe. crested Flycatcher.....	30	Myrtle Warbler.....	75
Brown Pelican.....	25	Phoebe.....	05	Magnolia Warbler.....	50
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Barrows Goldeneye.....	75	Acadian Flycatcher.....	15	Pine Warbler.....	50
Whooping Swan.....	1 50	Western Flycatcher.....	15	Prairie Warbler.....	30
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White-face Glossy Ibis.....	1 00	Least Flycatcher.....	10	Maryland Yellow-throat.....	12
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Amer. Bittern.....	75	Prairie Horned Lark.....	15	Long-tailed Chat.....	15
Least Bittern.....	20	Amer. Magpie.....	15	Hooded Warbler.....	50
Amer. Egret.....	30	Blue Jay.....	05	American Redstart.....	15
Snowy Heron.....	15	Amer. Crow.....	05	White Wagtail.....	10
Louisiana Heron.....	12	Fish Crow.....	35	Meadow Pipit.....	10
Little Blue Heron.....	12	Starling.....	25	Sage Thrasher.....	50
Green Heron.....	12	Bobolink.....	25	Mockingbird.....	05
Bl'k. crown. N. Heron.....	12	Cowbird.....	03	Catbird.....	02
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Sora Rail.....	12	Yellow-headed Blackbird.....	03	Sennett's Thrasher.....	15
Virginia Rail.....	12	Red-wing Blackbird.....	03	Curve-billed Thrasher.....	15
Corn Crake.....	20	Bicolored Blackbird.....	10	California Thrasher.....	20
Florida Gallinule.....	10	Tricolored Blackbird.....	10	Bendire's Thrasher.....	75
Amer. Coot.....	11	Brewer's Blackbird.....	10	Cactus Wren.....	12
Eup. Snipe.....	25	Purple Grackle.....	05	Rock Wren.....	50
Dunlin.....	35	Great-tail Grackle.....	15	Carolina Wren.....	10
Willet.....	40	Bronzed Grackle.....	05	Lonita Wren.....	75
Bart. Sandpiper.....	30	House Finch.....	05	Bewick's Wren.....	25
Spotted Sandpiper.....	15	American Goldfinch.....	05	Baird's Wren.....	25
Lapwing.....	15	Arkansas Goldfinch.....	10	House Wren.....	05
Oystercatcher.....	25	Ch'stn't-collared Longspur.....	35	Long-billed Marsh Wren.....	05
Bobwhite.....	15	Vesper Sparrow.....	20	White-breasted Nuthatch.....	35
Texan Bobwhite.....	10	Grasshopper Sparrow.....	25	Brown-headed Nuthatch.....	25
Fla. Bobwhite.....	10	Lark Sparrow.....	05	Tufted Titmouse.....	35
Calif. Partridge.....	15	Western Lark Sparrow.....	05	Chickadee.....	12
Prairie Hen.....	20	Chipping Sparrow.....	02	Carolina Chickadee.....	15
Sage Grouse.....	75	Field Sparrow.....	03	Wren-Tit.....	50
Chachalaca.....	60	Song Sparrow.....	02	Bush-Tit.....	25
Red-bill Pigeon.....	75	Mountain Song Sparrow.....	25	Blue-gray Gnatcatcher.....	20
White-wing Dove.....	20	Heermann's Song Sparrow.....	10	Wood Thrush.....	06
Mex. Ground Dove.....	50	Samuel's Song Sparrow.....	05	Wilson's Thrush.....	12
Mourning Dove.....	05	Texas Sparrow.....	50	Russet-backed Thrush.....	15
Turkey Vulture.....	75	Towhee.....	10	Hermit Thrush.....	30
Black Vulture.....	75	Spurred Towhee.....	20	American Robin.....	03
Cooper's Hawk.....	50	California Towhee.....	10	Western Robin.....	10
Red-tail Hawk.....	50	Cardinal.....	05	Wheatear.....	10
Gray Sea Eagle.....	2 00	Rose-breasted Grosbeak.....	10	Bluebird.....	02
Merlin.....	30	Black-headed Grosbeak.....	15	Western Bluebird.....	12
Kestrel.....	25	Indigo Bunting.....	08		

KIRKE B. MATHES, St. Augustine, Florida.

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Any of the following would make most acceptable presents:

THE OÖLOGIST for '95.....	\$.50
" " " '92, '93 or '94 at 75c per vol. or the 3 vols.	2.00
"Methods in the Art of Taxidermy", Davie.....	10.00
[To all purchasers of Davie's work before January 1, I will make an Xmas present of \$3.00 worth of specimens or supplies—purchaser's selection—or I will send a credit card good for that amount.—LATTIN.]	
"Taxidermy and Zoological 'Collecting'", Hornaday.....	2.50
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Any of the above books will be sent prepaid upon receipt of price. Address

**FRANK H. LATTIN, Publisher of The Oologist,
ALBION, N. Y.**

NIAGARA FALLS.

Hundreds of the Readers of the OÖLOGIST visit Niagara annually and they always make it a point to visit

TUGBY'S NEW MUSEUM.

This new museum is located on Falls street, only a few steps from R. R. Depots—Electric car line passes its entrance—and occupies a new three story building, which cost thousands of dollars to build and fill—Among the hundreds of attractions within will be found a large and magnificent collection of Birds and the LARGEST COLLECTION OF BIRDS EGGS in a Public Museum in the State. It is a well known fact the World over that TUGBY of Niagara Falls, N. Y. is HEADQUARTERS for EVERYTHING in the CURIO, SPECIMEN, NOVELTY or SOUVENIR line pertaining to Niagara.

Collection of Birds Eggs for Sale!

I have recently purchased Mr. Rippens fine collection of Bird Eggs; this is the second largest collection in Canada, and was awarded a silver medal at the Toronto Exposition of 1892.

At standard rates this collection amounts to over \$1,500, but I am going to offer it at one-third standard prices, or \$500 cash will secure one the finest collections in the continent.

Do you realize what one-third standard prices mean? It means that by purchasing this collection, you can obtain such eggs as Golden Eagle at \$2 per egg; Sea Eagles, 65c; Flamingo, 35c; Loon, 50c; Snowy Owl, 65c; Snowflake, 17c; Ruff, 7c; White Ibis, 12c; and other rare eggs at one-third their value.

Here is a chance for some wealthy Naturalist to obtain a fine collection cheap, or any dealer of enterprise might easily double his investment, by breaking up this collection and selling it piece-meal.

Bargains for Young Oologists.

The above collection contains several rare singles and second-class eggs. These I shall weed out and offer at following rates:

First-class singles.		Second-class Eggs.	
Western Grebe.....	\$ 15	Loon.....	\$ 50
Kittiwake.....	15	Kittiwake.....	08
Mew Gull.....	10	Iceland Gull.....	25
Fulmar.....	18	King Duck.....	25
Gannet.....	15	Ruff.....	06
Sandhill Crane.....	1 00	Cassin's Auk.....	25
Sea Eagle.....	1 00	Tropic Bird.....	50
And many others as cheap.		Ptarmigan.....	15
Send for full list.			

W. RAINE. TORONTO. CANADA.

"Davis' Standard Collectors' Directory of North America,"

Will appear soon, and will contain the names of over 10,000 reliable Collectors in Oology, Philately, Ornithology, Conchology, Mineralogy, and Mammalogy. Each name will be placed under one of the above special branches. There will be no charge for inserting your name, so please write your name plainly (and as many others as you know to be reliable, in your neighborhood) on a postal card) stating under which branch to place your name, and send at once to me. This will be an excellent opportunity to get your name in the best medium of exchange that has been, or will appear for years to come.

ADDRESS, EDWIN C. DAVIS, GAINESVILLE, TEXAS.

"I Want An Egg Collection!"

And with the assistance of my Oological friends I have most sanguine anticipations that with patience, forbearance and perseverance my almost insatiable thirst in this direction will ultimately, to a certain extent, become alleviated.

During the first thirty days of my collections career a nice little nucleus of about \$400.00 worth of sets has been formed.

During the second thirty days I shall be exceedingly liberal and broad in my offers and will accept strictly A No. 1 full and complete sets of *any species* recognized as belonging to the North American Fauna, except A. O. U. No's 444 to 766, inclusive, that have a greater value than 50c per egg or a less one than 10c. Many of these "excepted" species will however be accepted, but must be a matter of special correspondence.

The authenticity of these sets must be unquestionable and the data accompanying the same must be very complete.

I prefer (am not positive on these points however) to receive sets of '94 collecting and direct from the original collector.

Now if you have one or more sets which you think would please me and which you will exchange at *full* Standard Catalogue rates for anything I offer below or in November Oölogist at prices quoted I want them and wish that you would send on at once *prepaid*.

Remember I will only accept such sets as I have designated and on conditions named and although I will accept any number of sets from a single collector—I will not accept more than two sets of a species from the same party—I also reserve the privilege to return any set or sets not up to my standard and also the duplicate sets of many species which I shall undoubtedly receive, should I so desire. Your specimens are to be sent at your risk and *prepaid*. I will send all return packages prepaid and at my risk.

This offer is a very broad one and will never be repeated—it will hold in force until Jan. 15th 1895, not a single day later.

I have no time to correspond over this matter, hence do not write me in relation to the same unless it is absolutely necessary or your letter is accompanied with specimens. Faithfully,

FRANK H. LATTIN.

The following are the articles and the prices at which I offer them in exchange for the above in addition to the ones offered in November Oölogist:

Astropecten bizinosus A peculiar Star fish from China..... \$ 50
Asterias ochracea, That large yellowish California Star fish, covered with those peculiar knobby spines..... 75
 1000 back numbers of the Youth's Companion and Golden Days in lots of 50 or over, at 3c per copy.....
 Genuine Sioux War Clubs, stone heads, rawhide covered handles, selected specimens, (must go by express at exchangers expense)..... 5 00
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 A specimen of that large magnificent and rare Echinid, *Metalia speciosa*..... 3 00

Egg of Gray-tailed Cardinal..... 50
Nidorella armata, a peculiar Star fish from Panama, somewhat suggestive of a miniature African shield..... 75
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 Card Case large size with polished Agate sides..... 8 00
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 Cigar Cutter Charm, Agate..... 1 25
 Ladies Double Pins, best rolled plate posts and chain with assorted topaz and amethyst bangles..... 2 50

Address all letters and packages that have connection with anything mentioned on this page, plainly and in full to

FRANK H. LATTIN,

ORLEANS CO.,

ALBION, N. Y.

THE OÖLOGIST.

VOL. XI. NO. 12.

ALBION, N. Y., DEC., 1894.

WHOLE No. 110

A Few Notes on the Tufted Puffin.

The Tufted Puffin (*Lunda cirrhata*) belongs to a curious sub-family of birds, its grotesque beak alone making it an object of curiosity.

It is known as the "Sea Parrot" from its general resemblance to a parrot, but more particularly because of its beak. The structure of the Puffin is compact and it is one of the most powerful sea birds found on the Farallone Island. It has great wing power, as have all the sea birds for in the migratory season they cover immense distances.

numbers, usually on the rocks near the summits of the higher cliffs. They will often sit perched on a rock near the entrance to their burrows for a considerable time, making not a sound and suggesting to one a sentinel in the performance of a solemn and important duty. They are the most striking birds that inhabit the cliffs. The body is almost a uniform black terminating abruptly at the neck, the head being white. Two straw-yellow plumes, one on either side of the head curve back and downwards, are of almost a silken fineness. The immense beak consists of



From Photo by Barlow.

Egg, Nest and Nesting Site of Tufted Puffin.

The Tufted Puffin is seldom found along the Coast, but Mr. L. M. Loomis of the Cal. Academy of Sciences has recently proven by personal observations that many of the sea birds (among them the Puffin) keep well out at sea in their migrations, with the coast line barely in view as a guide.

On the Farallone Island the Tufted Puffin is to be found in considerable

several transverse sections, colored with varying shades of red, green and vermillion.

The Puffins are exceedingly wary when on duty near their burrows and keep a lookout on all sides, and if one approaches them and makes a threatening movement—they immediately plunge from their perch and swiftly sail out over the ocean. They are

also very tenacious of life, and unless one is armed with a gun, to capture and kill a Puffin is no easy matter. I once saw a Greek egg-picker catch a bird in its burrow and attempt to kill it. He wrung its neck and struck its head against a rock very forcibly but to no avail, until a knife was used to sever an artery. I shot several of these birds for skinning purposes and found it required hard hitting to kill them outright.

The nesting habits of this species are most interesting. They nest usually at the end of natural burrows in the granite cliffs, varying in length from two to five feet. They also are found at one place on the Island where there are numerous large boulders gathered on a hillside. Here the eggs are laid in little depressions behind the rocks, generally out of sight of a passer-by. The Puffins raise at least two and possibly more young in a season, and the date of nesting varies with the seasons.

One egg is laid at the end of the burrow, a few pieces of coarse, dry weed generally being used as a nest. The female Puffins sit very close, especially as the egg advances in incubation. While approaching burrows known to be inhabited, and making considerable noise by reason of scrambling about among the rocks, I have seen the birds come to the mouth of their tunnels and and upon seeing me, take wing. In these cases usually I secured fresh eggs. Again I have peered into a long, dark burrow to see the conspicuous white face of the Puffin pointing toward me. A writer has suggested this is a signal of danger (to the collector). Generally the birds would prove to be covering an incubated egg or a young bird.

A scoop is used to good advantage in gathering the eggs from deep burrows and is a much more comfortable means of gathering the treasures than by reaching in when Mrs. Puffin is at home. The Puffins have a reputation of being "stayers" if once they get the fingers of

an enemy in their powerful beaks. This reminds me of one of the egg-pickers who had a friend in San Francisco, who possessed a lonely parrot. Having heard of the "sea parrot" he suggested that the egger bring him one as a mate for his "Polly." This occurred to the egg-picker as a capital joke, and he immediately secured one and it came in on the boat that we returned on from the Island. It is safe to say that if the recipient placed the "parrot" with his domestic Polly, the latter did not survive long enough to secure an introduction to its cousin from the sea.

The young of the Tufted Puffin are an entire black in color. The Puffins subsist, I believe, entirely upon fish which they catch and do not eat eggs.

The eggs of this species are somewhat large for the size of the bird. They show much variation as to size and markings and are pointed. Few eggs are found which can be called pure white as most of them have deep shell markings of a light lilac shade. I have one egg which is spotted over the entire surface. Another has a heavy wreath about the large end, composed of wavy blotches of light brown and lilac. In a large series great variation is obtainable. I should judge that the first part of June is most favorable for fresh eggs, as on the 20th almost all were badly incubated and a number of young were found.

On one cliff I came across the evidence of a probably fierce battle. In a burrow some four feet in length was a Puffin sitting sedately upon its fresh egg. About one-half the way in was a dead Cassin's Auklet, evidently having been dead a day two and near by was its single white egg. I inferred that the Auklet had selected the burrow as its home and was incubating its egg when a ferocious Puffin came along, "jumped the claim," murdered its almost helpless owner and took possession. I took the Puffin's egg and left the scene of the fray.

Owing to its peculiar structure and beak the Tufted Puffin is one of the most interesting specimens an osteologist could well secure, though the striking coloration of the beak rapidly fades after death.

Many of the eggs of the Puffin become nest cracked by being rolled against the sharp edges of rock by the parent bird in leaving and entering the burrow. These birds nest in colonies on some parts of the Island and seem to dwell together harmoniously.

As night silently settles over the Island, after a glorious sunset, the Puffins come forth from their burrows and can be seen at twilight perched stolidly on the cliffs—a guard as it were—over the Island until the first gray dawn in the East shall announce another day and the harsh glamouring of the sea birds lend life to the scene once more.

C. BARLOW,

Santa Clara, California.

The Scarlet Tanager.

Did you ever see a girl dressed in a bright scarlet gown with black velvet sleeves? Of course you have; and if you are anything like me, you are not an admirer of this kind of dress. It is too flashy and brilliant for a street costume, and rather savors of show, and a tendency to be conspicuous, and seen of men.

However, we can forgive the gaudily dressed person, if there are redeeming traits of character, and particularly are we liable to overlook the foibles of fashion, if the individual possesses a pleasing voice and graceful manners. This comparison of the Scarlet Tanager with the flashily-dressed girl, could be carried still farther, but I hear some girl student of bird-life, remark, that I am a little crooked in my reasoning; for it is Mr. S. Tanager who shines forth in scarlet and velvet, while the lady in the case, is known as a retiring and plainly dressed home-body.

The red-bird or fire-bird arrives, on an east and west line, on a parallel with New York city, about April the twentieth, or a little later as a rule, and sometimes not till the very last part of the month. Soon after the appearance of the brilliant males, the retiring, greenish-coated mates lend their presence. Many birds pass to the North, and during migration the Tanager is silent, but as soon as the neighborhood is selected for a summer home, these brilliant plumaged birds of thrilling, soulful melody, tune their silvery throats in the shade of the groves.

When a child I was told that this brilliantly-colored bird never sang, and I used to view it as a representative of fashion alone, in bird-dom, and did not rank it among my favorites. Later, when I had become familiar with its beautiful song, and had listened to its soulful notes in the forest, my admiration increased.

There are few species of our songsters which surpass this retiring woodland bird, and it is to be doubted if there are any singers of the deep woods who equal him. Although comparison fails to do justice to this songster, it may be said that the Tanager's refrain is something like the song of the Rose-breasted Grosbeak. It is not nearly so loud nor quite as variable but there is a similarity to an extent. To copy the song by a series of syllables on paper is seldom satisfactory. In fact, this is hardly ever a success with bird songs, for the songs, though familiar, do not always sound the same to our ears at different times. From this reason, a very thorough study of the notes must be made before it is best to offer our notes on bird songs to the public. I have repeatedly taken notes on this bird's song, but have not yet resolved them into notes which I would want to to publish. While speaking of bird songs and their description, a few words to observers may not be out of place.

If one records with pen and ink, the song of a bird, that is, translates it into sounds which can be placed on paper, and then lays the description away, it will usually be found that the next description of the same song will not correspond with the first record. In this manner five or six, or more different songs may be credited to a species whereas it has but one or at the most no more than two or three. If we go into the woods and fields with our minds made up about a bird's song, we will hear that song just as we have it in our mind. For instance, one bird says, 'bob-white,' another 'whip-poor-will,' and still another 'kill-deer,' and it is difficult to fit other suitable words to the song-notes, because we have known them so long. However, we well know that American strangers to the notes might adjust the songs to decidedly different syllables, and it is utterly beyond our ability to say how a Frenchman or German might define the song.

The fire-bird sometimes sings during the hours of darkness, and it is one of the seven or eight species who are musical at night in my locality. It is only during May and June that it favors us with its notes at night, and then only at rare intervals, and in a quarter of a century of observations I have only noted the song during the hours from ten p. m. to one a. m. a few times.

Soon after arriving the bird begins mating, although I am satisfied that this species, like nearly all other song-birds, is principally mated on arrival. The nests are not rarely begun by the middle of May, but more often a week or ten days later.

The nest is a very shiftlessly constructed affair, and is so poorly put together that the eggs can nearly always be seen through the thin bottom, or even sides, and collectors frequently govern themselves in regard to date of climbing the tree, from a daily or weekly inspection of the nest from the ground.

Nests are nearly always found on horizontal limbs, and at from three to ten feet from the main body of the tree, and at an elevation generally of twelve to thirty feet above the ground. One nest which met my notice was above forty feet, and two were just below that height. One nest was only eight feet up and another barely ten feet. The structure is often placed in a horizontal fork, but is frequently built on top of a limb and supported at the sides by small shoots. It may be that nests are occasionally found in upright crotches, but they are never taken in these situations to my knowledge. Neither are they usually found close to the trunk.

The fire-bird often selects high woods, and more nests have come to my notice in oak woods than any other. In these situations it generally prefers white oak trees, *Quercus alba*. In lower lands, the birds select beech and sometimes elm. On one occasion I found a nest in a wild crab-apple and a friend took a set in an ironwood.

Small twigs and roots mainly form the structure. To these, dead grass, and strips of bark, are occasionally added, and at times dead leaves are found.

The earliest date at which I have taken a complete set is May twenty-third, while the best date collecting fresh eggs from the 40th to 43d parallels is about June tenth. It is not rare to find fresh sets as late as July first and I have taken eggs on the eighteenth of that month. It is not easy to account for these late nestings, but it is probable that they are the result of disturbances to the first attempt, for it is generally believed that this species rears but a single brood during the season.

The eggs are so well known that but slight description will be given here. In color they are of a bluish-green, inclining to green and are marked and

dotted with brown, sometimes over the entire surface, but oftener near the larger end. Occasionally there is a confluence of blotches, which makes a patch at the butt, and again the spots form a ring. If a comparison were made, it might be said that the red-bird's eggs more nearly approach those of the Rose-breasted Grosbeak, both in color and markings, than any other eggs that we have in my section. They are almost always smaller than the Grosbeak's, yet I have seen them so alike in size, shape and markings that the best expert would be deceived and not able to identify.

Davie gives three to five as the size of a set, but I have never found a set of five eggs, nor can I learn of that number being taken. In quite two-thirds of the complete sets that I have found only three eggs occupied the nest.

Although so well known, the collections of eggs throughout the country, do not contain good series of sets of this Tanager. I refer to local collections, and not the ones which are bought and exchanged for all over the Union. In fact I can say that the eggs of this species are not easily taken.

It is not rare to find nests, but it is not always an easy matter to get the eggs. I recall my earlier attempts at securing the eggs. The first nest was all of ten feet from the trunk and placed on a limb of a size which would not bear my weight, nor could I bend it up to the limb above. Placing two friends below with a blanket in their hands, I tried the act of shaking the eggs out. Result: Shook out O. K. but smashed when they struck the blanket.

My next nest was well out on a limb and quite thirty feet up. Reaching out I tied a rope on limb and the other end of the rope was made fast to limb above. Then I whittled for a half hour. Result: Limb rotated when rope was pulled and eggs went to destruction. The next two sets were just ready to

hatch and the eggs ruined in attempts at blowing. In fact I had been collecting four years before a good set was secured.

Like the efforts of most boys, my persistence was worthy of a better cause. Now, as I look back, although there are a thousand pleasing memories in connection with my trips and escapades, it is painful to think how I erred in judgment for the need of an advisor.

There was no OÖLOGIST in those early days to help a fellow along.

DIDYMUS.

Water Birds of Heron Lake.

Every collector of eggs in America, nearly, knows about Heron Lake, the "locality indicated on the data for his sets of Franklin's Gull being," Heron Lake. Jackson Co., Minn. Knowing well the famousness of this collecting ground, and aware that this spot is the home of that quiet but enthusiastic gardener, sportsman and ornithologist, Mr. Thomas Miller, I found an added satisfaction, last April in the fact that my new work had called me to a spot not five miles from the homes of Mr. Miller and the Franklin Gulls.

It is a really wonderful avifaunian region. The lake at high water has a linear extent of fifteen miles. (In 1870, before the day of railroads, a steamer plied the lake, for this distance, while Sandhill Cranes nested, plentifully, on the prairie slopes along the western end of the lake.) Thus, evidently, is formed a local point in the belt of migration lying immediately west of the Mississippi river; while the sparse occurrence of tiny natural tree-groups (oak, ash, box-elder, cottonwood), and of well regulated and well grown "tree-claims" and "wind-breaks," provides the finest of resting and feeding places for the smaller land birds. (Mr. Miller sets, behind his pipe, of a Sunday afternoon in early May, beside his door, be-

neath one of the trees in the narrow belt of natural growth elders at the head of the lake, and counts more kinds of Warblers and such-like in half an hour than you big woodsy fellows of Pennsylvania and Michigan can identify in a week!) From the high plateau of my Wilder home, Heron Lake, in summer, appears as a narrow belt of silver, girding the greenery of the field and meadow, five miles to the south. But, in mid March of this year, as I came down to "look over the ground," it lay, as a sombre, gray possibility in the vague distance, whence and whither came and went great phalanxes of Mallards, impelled by hunger; and dazed by the mist and the sleet that swept and drove, here, there, and everywhere.

On April 3d this region gave one a kindlier welcome. There lay the lake, and Gulls were wheeling and whirling, Ring-bills, maybe, for they did not come near, nor linger long. The evening of April 6 a flock of my favorite White-fronted Geese sounded their haut-boy call, and early next morning, on the wings of the warm south wind, came a wave of migration, great flocks of Canvas-backs, in lines and V's, and crescents, their wings silvery gleaming, and among them all, one solitary Snow Goose.

Next morning the clear, resonant bassoon of the Sandhill Cranes called the eye upward to where the stately forms were sailing northward, "half-mile" high, or gun-shot low, in squads and companies of six, nine, fifteen, forty-five: why didn't they come down and nest, as they used to twenty-five years ago. It was too much,—this superabundant sign of bird life. My car (with horse and carriage) not yet arrived, I set out for Heron Lake on foot. Just launching my boat, I hear again the Sandhill's trumpet call, and, look! seventy-five, passing, low down, across the lake-arm, barely out of range!

I near an island. Blue-winged Teals arise from the grass; a Gadwall drake whistles by, unheeding boat or man, a gaudy Shoveller winds his watchman's rattle, across the bay; and a white cloud of Forster's Terns came whirling and gliding past with strident calls.

A large island tempts me ashore. From growths of reed and grass, with water hip deep, the Mallards rise, suddenly, and escape my gun. In a shallow pool are Green-wings feeding, and here on the margins, are springing the tender shoots of *Vallisneria* and now I know what calls hither those rafts of Canvas-backs that are whitening the distant waves, rising, now and then, for very unrest and lurking fear.

About mid-afternoon the incessant passing of the ducks, beyond my range became monotonous, when suddenly a pair of Canada Geese appears, above the near cane brake horizon, perhaps a half mile away. The distance was ridiculous, but what sportsman would not have grasped his gun afresh, and waited a nearer approach, with beating heart. The birds were passing slowly over a small island clad with canebrake of unusual luxuriance, when suddenly four bellowing shots rolled out in deliberate succession from beneath the birds. With renewed eagerness I watched the Geese move onward, unruffled, expecting instantly the spasmodic lift of wing and the wheeling fall, for these birds fly far when hit and die hard. Suddenly, sure enough, one bird poises her wings and lowers her course, slowly, steadily and drops in the midst of a bare, fire scorched shallow on the lake margin, over a mile away. Quickly I take oar to help the successful sportsman find his bird.

As I near the island where the shots were fired I see upon rounding a point a whole raft of Ducks, gracefully riding the restless waves. Cautiously I hug the grassy margins, and leap ashore and steal across the island through

dense growths of grass and canebrake, the latter, often ten feet high. But here the musk-rats have mown their timber for years. It lies yard measure deep in some spots. There just beyond me is an open space, twenty feet square maybe, and well shut in with the drift and wrack piled deep above the very shallow water. And near to one side, is a mound of material, three feet across and eight inches elevated, of grass and reed stems and flag stems and grey down and in its center (a hollow, wash-bowl size) are four great white eggs! What! a nest of the Canada Goose, not five miles, as the Herons fly, from the sound of clicking typewriters, and of the parsing of Greek verbs, from the bustle and the routine school life and of "actual business?" A nest of the Canada Goose and the mother bird is dead! Thus my personally taken set of Canada Goose eggs were laid by perhaps the last pair of these birds to breed at Heron Lake.

I press to the farther margin of the island to get a shot at that flock of Ducks. There they are, thick together, I raise my gun, suddenly a boat prow eclipses half the flock and a disappointed city sportsman gathered in his decoys. "Hello," I cried. "What?" [shortly] "Your Goose fell dead over yonder!" "I know it!" [snappishly]. So I went on alone to find the bird, whose mate, incessantly calling, betrayed the place where she fell.

Ten minutes hard wading in the shallows, away yonder is the bereaved gander, off he goes, *and his dead mate briskly follows!* And so is ruined a pathetic story. Two other nests were later found, containing eggs and I myself in June discovered, on a rat-house, the depth of the wilderness of grass and cane, a deserted nest, the young hatched and gone and a single egg of Forster's Tern reposing in a hollow in the very middle of the nest. Later still I flushed fourteen *old* Geese in one flock. Wary

birds, the wariest of the wary, may they here long breed and prosper!

But now to my notes again. April 13th a pair of Loons arrived in the little lake across the railroad track from my house. They staid a week.

April 14th the Greater Yellow-legs began to appear in the grassy pools. Four days later their lesser cousins began to arrive. Both kinds grew more abundant until the middle of May when they practically disappeared.

April 18th found me at the Lake again. A few Red-heads; a Pintail or two; a pair of Marbled Godwits; and scattered "wisps" of Pectoral and Semipalmated Sandpiper, were among the species newly seen.

The last of April, American Bitterns began to be heard booming in the marshes. Then on May 3d came the Franklin Gulls, all at once, fifty in the first flock I saw. What charming, sociable, Swallow-like birds! Why have not the men who have taken their eggs by the hundred told us somewhat of their "life histories?"

P. B. PEABODY.

(TO BE CONTINUED.)

Some Experience with the Young of the Ruffed Grouse and Bob White.

(PART I)

To those who reverence Nature and learn to worship through her teachings, it must always seem a lovely circumstance that the inherent fear, the wayward disposition in the wild bird and mammal alike, yield to domestication only through the agencies of kindness and of patience.

To domesticate, we must first gradually gain confidence from the wild spirit of the individual in hand, and then, through many succeeding generations, by painstaking care, I might say by love, must instill into the being of the once fearful species, the trust and feeling of fellowship which such environment usually inspires.

It would seem that our Creator intended all animals to administer to our wants in just such proportion as we show ourselves deserving of them, in our attitude towards the lower animals.

For instance, a wild species, which is found by man to be of much value, if not domesticated by him, must be killed to be utilized, and is surely doomed to ultimate extermination, towards which end the Beaver and the Passenger Pigeon have already so nearly come. Again our animals, when domesticated, are profitable just in proportion as they are made the more comfortable. To get the best results from a cow, or a sheep, or a hen, we must study the needs and bestow the care upon it, that will supply the comfort which the animal requires; and the improvement of breeds is accomplished only through the appearance and predominance of valuable characteristics which conditions more favorable than the species had before known, had caused to develop and remain. In other words, man must domesticate through kindness and care for with kindness in order to derive the greatest benefits from any native species whose habits will admit of such a course.

It is a very interesting study to note the different degrees of adaptability to domestic life, and the ease with which some species are subdued while others remain as yet unyielding.

All this is fine to think of and now for variety's sake let us be honest and admit with what pride we, who are loyal citizens of the greatest country in the New World (and every Ornithologist loves to eat), remember that the magnificent turkey, symbolical of Christmas and Thanksgiving Day throughout our land, is exclusively a North American species. And more,—the turkey wears feathers!

I started out, however to tell you something of my experience in dealing with the wild natures of a brood each

of the Ruffed Grouse, *Bonasa umbellus*, and the Bob White, *Colinus virginianus*.

In a black ash swale a Ruffed Grouse was flushed from her nest in the dry leaves, beneath the end of a fallen tree, and a clutch of nine eggs procured for our experiment. I secured the services of a Black-Red Game Bantam hen, which had already manifested a strong desire to hatch a brood, she being in my mind the nearest approach to the natural mother obtainable.

Then followed many anxious days of watching; the eggs being partly incubated I was unable to know just when to look for the appearance of the young. During this time all preparations for the expected brood were completed. A tight board, movable pen, fourteen feet square was constructed, open at the top, and ant hills and other sources of insect food located. I had been informed that after the hatching the mother partridge always led her brood at once to an ant hill, the inhabitants of which furnished the first food of the young birds.

At last the eventful day had come. I entered the apartment in which the hen was sitting, to find things in a state of the utmost confusion. One of the eggs had hatched, and its former occupant had at once left the nest, where its less forward brothers and sisters were yet striving to free themselves from their prison shells, and was running round and round the room peeping loudly at each step. The hen, uncertain what course to pursue, maintained a balanced position upon the nest of eggs. Any who have had experience with hatching chickens will readily understand the perhous aspect of such a state of affairs. The little fellow was at once removed however to a warm place and quite soon established in the sitting apartment. A few hours passed;—I went cautiously to the nest to see how things were progressing, and as I rais-

ed the hen from the nest, I found not three, nor four, nor five, but eight more little partridges. Every egg had hatched. So far very well. Now, begins "my tale of woe."

From the very first the little ones seemed afraid of their foster mother; they neither understood her clucks and cries of alarm nor her attempts at brooding them. All were transferred from the nest to the pen in the open air and ants, flies, beetles, larvæ of various kinds, angleworms, crumbs, etc., were put before them but they took no notice of the food although the hen called their attention to it in her most coaxing tones, picking up morsels and dropping them again and again before them, but not one would even deign to notice her discomfiture. In fact they never ate, that I am aware of and their crops were found to be entirely empty after death. The old hen was true to the last and never did a mother do more for her brood but they were apparently as much afraid of her as of me. Round and round the pen they walked in single file, peeping much like young turkeys, though not so strongly, until one by one they dropped by the way; the victims of starvation in a land of plenty. I must confess that, though hardly to be at once reconciled to so summary a disappointment in the death of the young birds, I was relieved to know that the little sufferers were at rest. The continuous and plaintive peep, peep, peep, haunts me still. There is undoubtedly a better way than that in which I handled these young Partridges. That they must be confined, however, I am certain or all would at once stray from the hen and be lost. They seemed totally incapable of receiving any care whatever from the hen; they never ate, they never rested. Although after studying the "ways and means" of the subject thoroughly, I intended to try again, I am convinced that some course very different from any common method of procedure with wild birds must

be found, if success be possible, in rearing the young of the Ruffed Grouse, known more popularly with us as partridge. Could we but rear one brood in confinement, partial domestication, at least may not be impossible.

With the Bob White or Quail my work was far more satisfactory.

L. WHITNEY WATKINS,

Manchester, Mich.

(TO BE CONTINUED.)

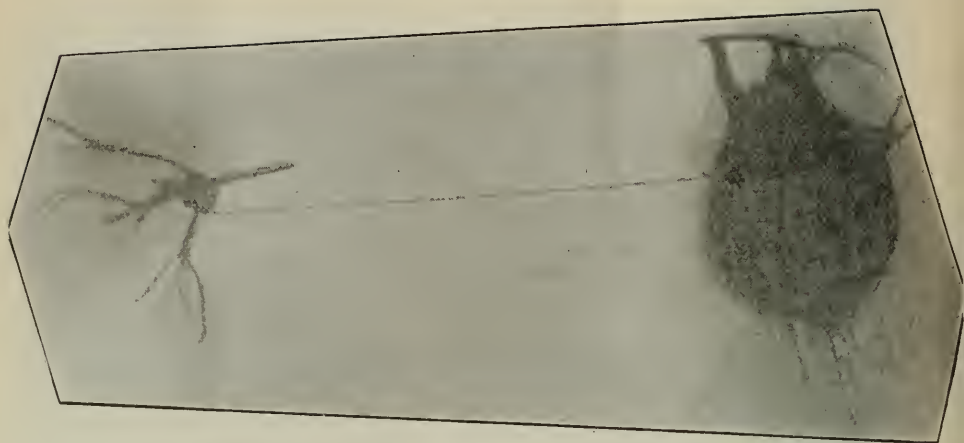
Protest Against Bird Slaughter.

At the November meeting of the Cooper Ornithological Club of California held at San Jose, Cal., resolutions were adopted condemning the practice of slaughtering many beautiful birds for millinery purposes. The resolutions are as follows:

Resolved, That the Cooper Ornithological Club deplore and condemn the perverted taste and cruelty of the fair sex in fostering the slaughter of thousands of Egrets (for their plumes) and countless numbers of other birds, of song and beauty, for millinery purposes; and that we especially condemn the shooting of Gulls and Terns on the shores of San Francisco Bay, as well as Snowy Plover and other shore birds along the coast, and the wholesale slaughter along the Colorado River, the breeding grounds of numerous species, which are being exterminated by Indians employed by unscrupulous whites; that we view with alarm the appalling fact that more birds are destroyed annually in the United States for each large millinery firm than are contained in the combined collections of bird students in this country—the accumulation of generations. And be it further

Resolved, That every means be put forth to influence legislation for the protection of birds, and to discourage the wearing of birds, resulting in such shameful annihilation of the beautiful creatures of the air, the common, inalienable heritage of all who love Nature, and her children of hill and valley, wood and shore. And be it further

Resolved, That a copy of these resolutions be sent to the intelligent and generous press, who may assist in the elimination of this execrable evil of fashion.



From Photo by Allen.

A Remarkable Nest.

A nest of the Baltimore Oriole, mentioned in "A Study of Nests" on page 392, October OÖLOGIST. "A string was woven into the nest at one side, and then carried up to a higher twig, thus keeping it from closing as it would otherwise have done, so that the parent bird could not get in."

Notes from Audubon's Biography.

FRED W. PARKHURST.

Part VII.

Mr. Audubon called on Mr. Breedlove, the Collector of Customs for New Orleans, and presented to him his letters from the Hon. Levi Woodbury, and he at once assured Audubon that the revenue cutter the "Campbell" would be at his disposal within a few days, but the service or other circumstances, did not allow the arrival of the vessel at New Orleans until late in March. Soon after the commander of the Campbell called upon them, and they were soon stowed aboard his tight little craft. Proceeding down the Mississippi they sailed through its southwest pass, where they were joined by a vessel of eight tons, as a tender for their excursions along the shores. They reached the bay of Galveston on the 24th of

April, 1837, and ransacked not only the island of that name, but all those on that celebrated inlet of the Mexican Gulf which they thought worth the while.

The "Campbell" was the first armed vessel of the American Navy that had entered the bay, and the fort at Galveston returned the salute fired from the great gun of the Cutter by twenty-six fires. This was quite a surprise to Audubon, and he was almost as much astonished when he received a visit from the Secretary of the Navy of the State of Texas, with a written invitation to proceed to the seat of Government, Houston, which was about eighty miles distant from their place of anchorage. The "Campbell" proceeded towards this place about twenty miles, when, meeting with a bar on which there was not more than about four feet of water at full tide, she again came to anchor. At this place, which is called Red-Fish

Bar, on the 9th of May, Edward Harris, Captain Coste and five sailors took the gig, while the crusader (the tender) took the Secretary of the Texan Navy, M. Fisher, Esq., a Mr. Ward and Audubon and his son. They crossed a large but shallow bay with a fair wind, and sailing rapidly, passed the town of New Washington, and soon afterwards several plantations, which formed a pleasant contrast to the barren salt-marshes and sandy shores of the gulf.

About noon they entered Buffalo Bayou. Ducks of various species, Wild Turkeys, Ibises and many other birds were seen in great numbers. The two vessels glided swiftly over the turbid waters Bayou until they reached a comfortable house, where, after a hasty examination of the surrounding country, they passed the night. It had commenced raining in the night and in the morning it was falling in torrents, but the Secretary of the Texan Navy being anxious to reach the seat of Government, they started in the Campbell's gig. Houston was reached early the next afternoon, and the city was a welcome sight, for they were all drenched to the skin. Immediately after their arrival they were presented to General Houston, who received them very kindly. The town was crowded with drunken Indians, while the beautiful plain, on the margin of which Houston is situated, was covered with water ankle deep.

Having seen all that was interesting in the city, and offered the president as well as the officers of the staff their best thanks, Audubon and his party returned to their boat, and soon were flying swiftly with the strong current down stream. Several days were spent in searching the country around, and among the interesting places visited was the battlefield of San Jacinto, where Santa Anna with his Mexican forces was defeated by the Texans under Gen. Houston.

On their way to Red-Fish-Bar they

stopped two days at the hospitable mansion of Col. James Morgan, by whom they were received in a most delightful manner. Here among other rarities, they procured a fine specimen of the Climbing Rattlesnake, with *recurved* fangs.

On the 18th of May Audubon and his friends bade adieu to Texas, amid the salutes of the several armed Texan vessels at Galveston, and were soon sailing along rapidly on the broad waters of the gulf of Mexico. Six days later they anchored in the southwest Pass of the Mississippi. After making a short stay with Captain Taylor and his wife at the Balize, they were taken in tow by a steamer, and reached New Orleans on the 27th. Here Audubon had the pleasure of meeting his youngest brother-in-law, William G. Bakewell, of Louisville, Ky., with his wife, neither of whom had he seen for several years. The commercial revolution which had taken place during their absence prompted them to proceed at once eastward; and bidding their friends farewell, Audubon and his son set out for Charleston by way of Mobile, whence they crossed the country with the United States' mail bags, whereon, in lieu of downy beds and pillows, their weary bones rested in cramped positions at night, while by day they had ample opportunity of walking over miserable roads, through an almost uncultivated country, and with very indifferent fare. On reaching Montgomery, however, they met with a good coach, and moved at a more rapid rate towards their destination. Mr. Harris had parted from Audubon at New Orleans, and gone up the Mississippi to secure for him a collection of preserved Reptiles and other objects, and after a much more pleasant journey than befell Audubon and his son, joined them in Charleston at the house of the Rev. John Bachman. At Charleston the friendship which had so long existed

between Audubon and Dr. Bachman was still more firmly cemented by the marriage of Audubon's youngest son with the doctor's eldest daughter.

In the course of their long journeys over land, along the shores, and on the bayous, Audubon and his party did not discover a single bird not previously figured by Audubon. Whether this was because there were but very few more to figure, or their lack of success, is hard to tell.

Leaving Charleston they reached Norfolk after a short and pleasant journey, and proceeded at once to Washington, where Audubon presented himself to the President, Martin VanBuren, to whom he had letters of introduction from his good friend Washington Irving. They then passed rapidly through Baltimore and Philadelphia, it being Audubon's wish to reach New York as soon as possible. There he remained a fortnight while his son and daughter-in-law visited the Falls of Niagara. After their return the three went on board the American packet-ship the "England," bound for Liverpool, and arrived there seventeen days later. They made a flying visit to their friends, and immediately went on to London, where, on the 7th of August, Audubon's whole family was united once more.

Audubon found the publication of the "Birds of America" in a satisfactory state of progression, but received the disagreeable news that a number of his British patrons had discontinued their subscriptions, and that the most of those who still received their numbers as they came out were desirous of seeing the work finished in eighty numbers, as was expected. The price of a single copy of the "Birds of America" was one thousand dollars at that time, although they can be purchased now for less than a fifth of that sum.

(TO BE CONTINUED.)

Some Queer Habits of *Urinator imber*.

By TYRO.

There is at least one small piece of our country that has not as yet been carefully explored by the Naturalist. Within this limited locality is the northern boundary of the range of more than one species peculiar to the country west of the Rockies. I speak of northern Idaho.

The northern part of the state is not more than forty-five miles across. About fifty miles south of the northern boundary, the state is crossed by the Pend d'Oreille or Clark's Fork of the Columbian River. The people know it as the *Pond de Ray*. Tributary to this is Priest River which flows from Lake Kaniksu. This lake is north of the Pend d'Oreille. It is a very beautiful lake, surrounded by mountains. It is about thirty-five miles long and ten miles wide. Small tributaries carry the snow-water from the mountains to Lake Kaniksu and Priest River. The landscape of this locality is widely beautiful; savagely grand.

I attempt this brief description of the country because its very wildness has something to do with the habits of the bird of which I wish to write—*Urinator imber*. The bird is in perfect harmony with the surroundings and the surroundings are congenial to him.

We were camped at Blue Lake, a small sheet of water, with mountains on every side; John and Bob were coming north to join us. They intended to pursue the festive deer and catch mountain trout while we were observing the life about us and preserving an occasional specimen.

The gentlemen referred to were following our route by means of certain signs which we left along the trail. The last note which they dug up near the roots of a large pine, read, "Turn to the right—follow the blazed trail for

a mile or so—give the regulation yell and the fiends in the canyon will answer." John and Bob did their part. They turned to the right, followed the trail and gave the regulation yell. But the answer that came from the canyon was a "caution." "*Who-o-o-o-o-p!*" "What on earth—did you ever hear such a racket? It isn't them it's—" "Yes it is. It's some new yell they've contrived. Perhaps one of them has the stomach ache, or—or—" "*Gout. Ki-i-i-ip! Lo-c-c-a-ho!*" "*Who-o-o-o-o-o-p! Who-o-o-o-o-o-p! Yi! yi! yi-i-i!*" came from the canyon. "Well I'll—wouldn't it skin you anyway? Well, all we can do is to hunt em up." They hunted them up and were introduced to *Urinator imber*. Oh, that I could have first met him under similar circumstances!

We lived on a bluff, above the small lake. The lake was the home of several Loons. Sometimes there was but three, often five. The Loons were more apt to talk to us during the early morning or in the evening. The first of us who awoke in the morning would give a whoop that was always sure to start a concert down on the lake. Our campfire was the occasion of much inquisitive talk among them of an evening. There was little satisfaction to me in always watching them from the bluff. I wanted to get nearer—to touch one if possible.

Down near the water I saw a bed in the sphagnum where a deer had been passing a quiet day. A small trail told me that he frequently came here to drink. Early the next morning I took a stand on the shore a short distance from the trail. As soon as objects could be clearly seen, an old *Urinator* set up a yell. There was a strange object on the brush-covered shore, and he could not restrain his desire to inspect it. I say *he*, but, I will wager my rifle that "he" was a female. His bugle had roused his comrades and on they came.

They would make a large circle, gracefully sailing until their sides were exposed to me. There, seeming to become suddenly frightened, one or two would dive, while the others would scud away at a great rate. They would then reassemble, utter a few cries and make a circle that would bring them nearer. The same hasty retreat would again be made. This circling and retreating soon became monotonous and they adopted bolder tactics. They approached in a zigzag line. Now, the leader would waver, fall back, turn sidewise or rising up, flap his wings while another took the lead. Then, after several softly uttered cries they would all gracefully sail away, casting backward glances as if they were sorry to leave. Curiosity, however, was their master, and slowly turning round, they returned. This time they came in close order, occasionally uttering a sharp cry that seemed defiant. I moved toward them. There was a plunge and not a Loon could be seen. They could not remain under long as they were almost dying to know what I was. They came bobbing up in different places, flapped their wings and took another look at me. I did not look half as dangerous as the stag that drank at the lake the day before, and he was harmless. But what *was* I? I walked backward a few paces. Each Loon charged forward at his best pace, and each one screamed his loudest. A forward movement on my part caused a sudden halt on the part of the birds. They were almost within throwing distance. The bodies of three Loons were so close together that they made one large target. I slowly raised my rifle—bang! There was a curl of blue smoke near me and a small space of agitated water where the Loons had been. Their curiosity was gratified, our interview at an end and I was ready for breakfast.

Our next camp was about forty miles north of Blue Lake. We had sailed the

length of Kaniksu and established ourselves on the shore of Priest Lake.

We were quietly sitting on the granite rocks, looking at the sparkling bits of mica in the shallow water, when what should come sailing round a point near by but old lady *imber*? She was not alone but had her youngest son following in her wake. She at once recognized that tents, dogs and men were strange objects and turned in the direction of the open lake. A little excitement on our part caused Mrs. Loon to sink in the water until the little *Urinator* had seated himself on her back, when she swam directly from us at a rapid rate. She was beyond shot gun range and several repeaters brought into rapid action failed to separate her from her young one, although in her haste he was thrown from her back and compelled to swim for himself.

A certain point on Kaniksu lake can boast of three very distinct echoes. After these principal echoes, confused sounds would rattle around among the mountains and finally die out in the distance. One of our party had a weakness for making hideous noises, dancing scalp-dances and the like. When Raleigh chose to enjoy himself of an evening, a certain Loon across the lake kept up his part of the concert, presumably as delighted with the echoes and reverberations, as we. This bird took great pleasure in adding to his whoop an indescribable "yip" that none of us could imitate.

Urinator dreads flying and detests walking. It is not easy for him to rise from the water, and he strikes it very roughly. In every case where I saw one fly to the water near others, they plunged and came up at various distances from the visitor. Only once did I see one attempt to walk. He cut such a sorry figure that he became ashamed and waddled to the water. We frequently experimented with rifle and shotgun, but the Loon invariably

escaped. Once or twice he left a few feathers for us as a keepsake. Viewing him with a strong spy glass afforded us much pleasure.

It was the Loon's inquisitiveness that appeared most interesting to me. In the Eastern States I had never seen it manifested. Perhaps fear has overcome all inquisitive propensities that the eastern individuals may have had.

Methods in the Art of Taxidermy.

The public has been impatiently awaiting the appearance of the new work on taxidermy, and after several years of promises, the conclusion was arrived at, that Mr. Davie's Taxidermy (prospective) would never see the publisher's hands. So long a period has elapsed since the first mention of the proposed work, that it is not to be wondered at that impatient naturalists, taxidermists and collectors of skins should begin to feel uncertain as to the outcome.

But the author of this wonderful work, feeling that the publication was to be the effort of his life, postponed its completion from time to time in order to add new notes and illustrations and make it complete in every detail. At last Mr. Davie's Taxidermy has appeared, and the writer of this review can best run up the merits of the work by saying that it is perfect in every respect. There is no chance to criticise; no opportunity to pick flaws, either in the concise text, covering the art, or the admirable illustrations presented in the modern form of engraving. There is absolutely nothing omitted in the text. Every possible point is covered, while hundreds of hints are given, unknown to the generality of so-called bird-stuffers; and no one interested in Nature can read a page without profit. As boy and man, I have been devoted to the preparation of objects of natural

history for over a quarter of a century, yet there is scarcely a page in the new work which does not offer valuable suggestions to me.

With all due regard to the text, still greater credit is due to the incomparable illustrations. The illustrations so essential to the beginner, yet so rarely presented in publications, are complete in every respect, and it may be said that a natural artist could mount a bird, mammal or reptile from these aids alone, and without reference to the text. There is not a wasted sentence in the book, and neither is there a point lacking in the engravings; from the first incision in the bird's breast to the intricate work of turning the skin over the head—so difficult to the beginner—all is made perfectly plain.

The text and illustrations go hand in hand from the skinning of the smallest bird, to the complete mounting of the ostrich and elephant. But in addition to these, are chapters on mounting heads, preservation of fish, reptiles, crustaceans and a dozen other subjects, all profusely illustrated. Of course ample space is devoted to the preparation of a collection of eggs, and the subject is handled, as with all others, in a masterful manner, and thoroughly covers the ground.

Mr. Davie's aim is evidently one to make accurate workers of all collectors and taxidermists; and with this idea, he devotes his pages to practical suggestion; utterly ignoring the æsthetic in the text, but aiming to convince all through the medium of his illustrations, that

"A thing of beauty is a joy forever."

In a partial history of taxidermy, the author gives evidence of his familiarity with other works, and throughout his incomparable compilation, repeatedly refers in an admirable manner to other taxidermists of note.

Nothing can be said in criticisms of the general text as regards the sense

expressed, but there occasionally occurs a misleading word, or more rarely, a sentence. A sharp critic could also pick flaws with the position of some of the birds and mammal, but in the main the illustrations are all that could be desired, and perhaps it is not to the artist's discredit in delineating attitudes which fail to meet my approval.

There appears to be a growing tendency in our country to adopt English customs; and one, a most lamentable fad, of issuing publications with uneven sized and rough edged leaves, is upon us. The idea is distasteful to all who are not Angliomaniacs, even when the custom is followed in story editions, but to hamper readers with this ridiculous custom, and that, too, in a book of reference, is far from meeting with the approval of the sensible class of students.

The price of the work when advertised was a surprise to me, and it was felt that there could never be a demand for it, but on examination of the publication my only surprise is in the fact that Mr. Davie's "Methods in the Art of Taxidermy" can be sold at its present figure.

The work is admirable. It is incomparable. It will instruct the youngest as well as the oldest; the professional, and amateur as well as the beginner who is totally dependent on book instruction. Enough cannot be said in favor of this remarkable publication, which will hardly be approached, surely never excelled within the age of living man.

MORRIS GIBBS, M. D.,

Kalamazoo, Mich.

The Barbarism of Fashion.

It is with profound regret that all true Ornithologists and lovers of the beautiful feathered denizens of our fields and forests, learn from the recent

fashion papers that the wholesale destruction of birds for millinery purposes has again been resumed.

For the past few years, through the efforts of the Audubon society and others, the wearing of birds for personal adornment (?) had practically ceased, but now this dreaded fashion is again being brought into vogue by a number of leading milliners.

The accumulation of bird skins has been going on for a couple of years or more by dealers of forethought, who have been waiting patiently the time when they would again reap a harvest from their store of skins.

Early last summer [1893] a taxidermist from Poughkeepsie, N. Y. told me that a milliner from New York city had called upon him a few weeks before, wishing to make arrangements with him to collect that summer, *five hundred dozen* birds of bright plumage; and what was equally astonishing this milliner was introduced to the taxidermist by one of the leading professors of Vassar College.

The October *Auk* in speaking of the destruction of birds for this "absurd craze for hat decoration composed of bird skins," says, " * * * Thus a no less respectable fashion journal than '*Harpers Bazar*' in its issue of Aug. 18th last, in an article devoted to 'New Hats and Bonnets,' gives the following delectable information to its readers, without a word of protest or lament, under the subheading 'Birds and Wings.' * * * Blackbirds prevail, and are poised in pairs, with beaks meeting lovingly, their wings and tails pointing straight to give the shape of a large bow, and often resting on a still larger bow of liberty satin ribbon of many loops. This happy arrangement is on the front of small bonnets, while large hats have a second pair [of birds] across the back, resting on loops or *chaux* of ribbon below the upturned brim. Single birds perch on the front edge of

the brim of round hats, or nest in the large *ruche* that surrounds the crown—the nesting or brooding bird is not considered so effective as the newly lighted bird with wings still in the air. The dear little blackbirds have been touched with color by French milliners, who hesitate at nothing. They are given throat and breast of flint blue, aubergine, or emerald green, and their raven wings are also covered on one side with these colors.

Small bluebirds and others of pale yellow or pink are *giore* with jet along their slender wings and painted beaks. Large *chaux* made of feathers or stiff quills *pourde* with jet are effective trimming's."

It is indeed deeply to be lamented that the cruel fad had again been taken up—or rather forced upon the bonnet wearing sex. Every one who cares for the birds and knows the consequences that would follow their extermination, should feel it their duty to put forth every effort to abate and discourage this barbarous fashion.

WILLIAM S. JOHNSON,
Boonville, N. Y.

Seven Birds from Six Eggs.

Win. Hencke has a canary that takes the lead. She hatched seven birds from six eggs. This seems like one of William's hunting stories, but it's a fact. One of the six eggs was double yolked. The two hatched from this egg are quite a little smaller than the rest but are strong and healthy and will doubtless survive. They are now two weeks old. Six eggs are a large complement for a canary but to hatch seven birds from them takes the lead. The next nest Mr. Hencke expects two from each egg.

[The above we clip from the *New London* (Wis.) *Press*, and as to its reliability we need only add that the *Press* is edited and published by Chas. F. Carr.—Ed.]

THE OÖLOGIST.

A Monthly Magazine Devoted to
OÖLOGY AND ORNITHOLOGY.

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*. Articles, Items of Interest and Queries for publication should be forwarded as early in the month as possible.

ENTERED AT THE POST OFFICE AT ALBION, N. Y., AS SECOND-CLASS MATTER.

An exhaustive index of the OöLOGIST for '94 will be printed in next months issue.

We presume that all of our oölogical, ornithological, and taxidermal friends keep their instruments thoroughly Gun-oiled when not in use. If not, why not?

Hundreds of subscriptions to OöLOGIST expire with this issue, about Dec.

25th would be a most appropriate date to remember its Publisher not only with a renewal but with the new subscription of some interested friend.

Chas. K. Reed writes us that he is having the best seasons work he ever experienced—Four or five Deer heads, a Moose head or two and orders for half a dozen of those famous Bird Pieces under his patent Oval Convex Glass Shades, in addition to regular work, is only a fair example of an ordinary days business.

During the past few months the Publisher of the OöLOGIST has been the recipient of many flattering notices from the press of this country—of recent date the "Farmer's Monthly," and "The Nidologist" have dilated on the subject and even the new "Museum" tenderly refers to him as "the old concern." Thank you brethren.

Once more we are called upon to erase the name of a bright and enthusiastic young naturalist from the subscription books of the OöLOGIST—On Aug. 13 Leon Wasson died of typhoid fever at the home of his father, Waveland, Ind.

What was your rarest, or most interesting take of '94? Also, have you any wrinkle or contrivance, not generally known, that might be of value to some fellow-collector? Your account or description must be written briefly (*must not exceed 100 words*) on a postal and mailed the Editor of the OöLOGIST, on or before Jan. 15th. A Standard Catalogue will be mailed each writer and the three of greatest value will receive \$1.00 each, cash.

We have critically examined "collections" of all kinds, sizes and prices but can honestly say that for the money we have never seen anything in the line

that would compare with the "Washington School Collections" put up at "The Microcosm." The collections are so arranged that anyone of ordinary intelligence can readily understand them and in our estimation it would be a difficult matter to obtain a more appropriate Christmas present for a Nature loving friend.

Who can tell what living oölogist has collected sets of eggs of the greatest number of species of North American birds? To this query we might also add—what living ornithologist has shot and prepared the greatest number of species of North American birds?

Mr. K. B. Mathes, whose announcement appears on other pages, has been with "Lattin" for the past five years, has been with or for him at many of the leading Fairs throughout the United States, was in charge of one of his Chautauqua stores in '91 and again in '94—was at the World's Fair in '93 and had charge of most of L's exhibits during the fall of '94.

Mr. M. has a large personal acquaintance among the readers of the OÖLOGIST who will, with its Publisher, wish him unbounded success. This success it is safe to predict as he is an all around American hustler and is thoroughly posted in the business he has adopted, in all its details.

A Sportsmen's Exposition will be held at Madison Square Garden, New York, May 13th to 18th.

The following classification of the exhibits will characterize the nature of the Exposition. Collective exhibits allowed.

Class A—Firearms of every description, ancient and modern.

B—Ammunition.

C—Sporting Sundries and Appliances.

D—Fishing Tackle.

E—Boats, Canoes, etc.

F—Camping Outfits and Utensils.

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K—Cameras and Photographer's Supplies.

L—Saddles Bridles and Horse Equipments.

M—Sportsmen's Art and Literature.

N—Trophies of the Chase.

O—Loan Exhibits.

Full particulars can be obtained from the secretary, Frederic S. Webster, 106 East 23d St., New York.

American Ornithologists' Union.

The annual congress of the American Ornithologists' Union was held Nov. 13-15, at the Museum of Natural History, New York City. Papers were read by Frank M. Chapman on "Habits of Certain Tropical Birds;" Mrs. Abby F. C. Bates, on "A Swallow's Roost at Waterville, Me.," and others. The shot-gun once used by Audubon was on exhibition. Officers elected: President—Dr. Elliott Coues, Washington, D. C.; First vice president—William Brewster, Cambridge, Mass.; Second vice-president—C. Hart Merriam, Washington, D. C.; Secretary—John H. Sage, Portland, Conn.

You Are a Judge.

Your decision must be mailed us not later than the *first* day of January. Write on back of a postal card the five articles which *you* have decided to be the *most valuable, instructive and interesting* in this number of OÖLOGIST and mail to us. Number the articles in the order which you think the prizes should be awarded.

We give our Judges five prizes having an aggregate value of over \$5, one to each of the five whose decisions are nearest the final award of Mss. prizes.

NOVEMBER CONTEST.

Fifty-one Judges.

1. The Study of Bird Life, 237.
2. Leach's Petrel, 170
3. Nesting Habits of the Chestnut-sided Warbler, 138.
4. Collecting, viz; Oölogical, 111.
5. Notes from Audubon's Biography, 97.

The Judges prizes were awarded as follows:

1. No. 18—Harold M. Holland, Gal-
esburg, Ill.
2. No. 27.—Fred W. Knolhoff, East
Orange. N. J.
3. No. 35.—H. Gonld Welborn, Lex-
ington, N. C.
4. No. 46—L. G. Woodruff, New
York City.
5. No. 50—James Howe Slater, Web-
ster, Mass.

Judges No's 18, 27 and 35 named the winning articles in their exact order and No's 46 and 50 placed them 1, 2, 3, 5, 4. All prizes were mailed Dec. 14th.

ORNITHOLOGY and OÖLOGY.—I want to obtain a quantity of back numbers of various publications relating to BIRDS and will allow prices as follows for the same. Will accept any number of copies not to exceed 10 of the same issue. All must be *complete and clean*, "Bulletin of the Mettall Ornithological Club" and "The Auk" 30 cts. per copy. "The OÖLOGIST" (published at Utica, N. Y. and Rockville, Conn. 1875-81); the "Ornithologist and Oöologist;" and "The Nidologist;" "Random Notes on Natural History" Prov. R. 1. 5c per copy. "Wisconsin Naturalist;" "The Taxidermist;" "The Ornithologist and Botanist," Binghamton, N. Y. and any other periodical of not less than 8 pages, either amateur or professional, devoted to birds published prior to 1894, I will allow 3 cts. per copy. I will allow the above amounts in payment for specimens, instruments, supplies or publications or if you prefer will send credit check for the amount. All publications must be sent *prepaid* (you can mail them as "second class mail matter" @ 4c per lb.). "Returns" will be sent prepaid unless otherwise specified in catalogue. I can also use the following second-hand books on same conditions at prices quoted *prepaid*. Must be in A No. 1 condition. Cones' "Key to N. A. Birds" \$4.50; Ridgeway's "Manual of N. A. Birds" \$3.75; Davie's "Nests and Eggs of N. A. Birds, 3d or 4th editions, cloth, 85 cts, paper 65 cts; other *standard* publication will be accepted at one-half publishers prices. This notice will remain in force until Jan. 15, 1895. After that date write what you have to offer before sending. FRANK H. LATTIN, Albion, N. Y.

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On November 30th, 2:15 a. m., (the night after Thanksgiving) the Editor of the OÖLOGIST bagged an unusually well developed specimen of *Nyctequius*. As this is an unusually rare visitant in his immediate locality, it was deemed of sufficient interest to Kodak in its various phases for the delectation of the readers of the OÖLOGIST.

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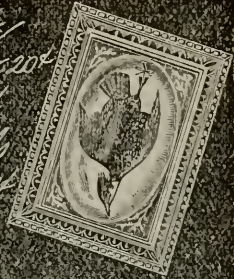
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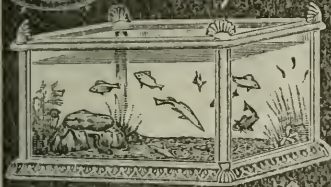
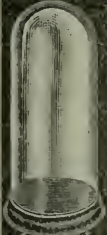
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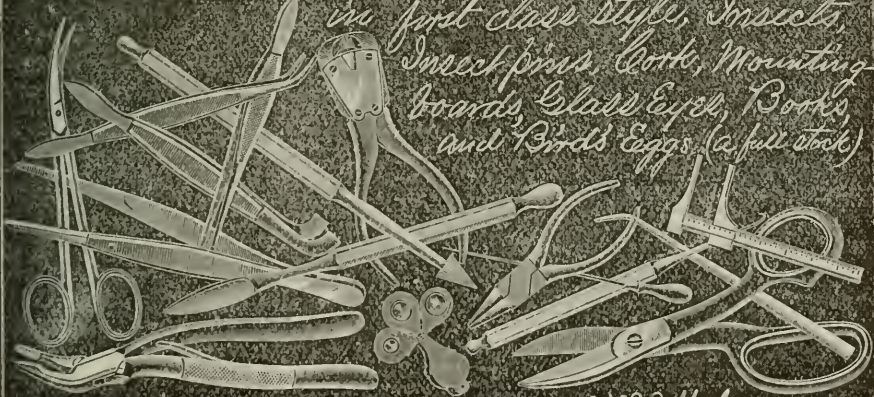
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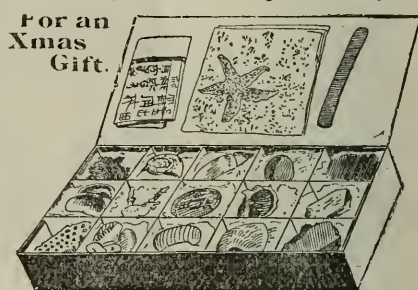
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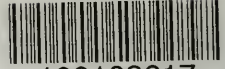
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